TRANSMISSION LINE SITING IN THE STATE OF MONTANA

HEARING

BEFORE THE

SUBCOMMITTEE ON WATER AND POWER

OF THE

COMMITTEE ON ENERGY AND NATURAL RESOURCES UNITED STATES SENATE

NINETY-SEVENTH CONGRESS

SECOND SESSION

ON THE

PROCEDURE OF THE BONNEVILLE POWER ADMINISTRATION FOR THE SITING OF ELECTRIC POWER TRANSMISSION LINES

MISSOULA, MONT., AUGUST 26, 1982

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TRANSMISSION LINE SITING IN THE STATE OF MONTANA

THURSDAY, AUGUST 26, 1982

U.S. SENATE,
SUBCOMMITTEE ON WATER AND POWER,
COMMITTEE ON ENERGY AND NATURAL RESOURCES,
Missoula, Mont.

The subcommittee met, pursuant to notice, at 9:30 a.m., in the Federal Building, Missoula, Mont., Hon. John Melcher presiding.

Present: Senator Melcher.

Also present: Russell R. Brown, professional staff member, and Craig Gannett, counsel for the minority.

OPENING STATEMENT OF HON. JOHN MELCHER, A U.S. SENATOR FROM THE STATE OF MONTANA

Senator MELCHER. Good morning, ladies and gentlemen. This is a hearing before the Subcommittee on Water and Power of the Senate Committee on Energy and Natural Resources. This subcommittee has legislative oversight over the five power marketing administrations including Bonneville Power. The hearing this morning is to get a good record of public testimony on the question of Bonneville Power's application for right-of-way for a power line from Garrison to the Idaho-Montana border. Senator Frank Murkowski of Alaska is the chairman of this subcommittee and he shares my own personal concerns regarding the routing of Bonneville's line. It goes without saying that he shares with me and the rest of the committee, the need to be responsive to the public's interest and particularly people who are directly involved or impacted by the proposed power line.

We want to point out that this will not be the last opportunity the public has for making comment on this proposed line. There will be ample opportunity first of all, to submit statements. We'll hold this hearing record open for 2 weeks from this date. There will be an opportunity to submit statements during those 2 weeks. There will be opportunity after that in the hearings before the Appropriations Committee of the House and the Senate when Bonneville submits its annual spending proposals, its annual budget to Congress.

I believe there are several pertinent points of consideration for this hearing. First of all, we're looking at a proposal for a right-of-way, as well as what the alternatives for that right-of-way, from Garrison to the Montana-Idaho border. We want to know what the opportunities are for the general routing of the line; where it could fall, where it

doesn't look possible for it to fall, and the various alternative locations that have been examined. I think in principle that the right-of-way should avoid agricultural land. It should avoid private property unless the owner agrees and accepts the right-of-way. It should above all, avoid homes. It should avoid degradation of Federal land which, in this case, is Forest Service land. If there is some other Federal land such as BLM land involved, I think it's this percentage of any right-of-way that might be granted.

The route must take into consideration and must minimize any impact on scenic and aesthetic values. Those scenic and aesthetic values must be protected both on private land and on Federal land. The impact of scenic and aesthetic values on Federal land that also impacts private land is just double jeopardy in my estimation. I think the governing law on the authority for granting the right-of-way was enacted in 1976 and specifically, the act specifically directs the Secretary involved, which in this case is not the Secretary of Energy or not the Secretary of the Interior. In this case, it's the forest land so the right-of-way involves the Secretary of Agriculture who would have jurisdiction over it.

The environmental impact statement is in preparation. As to the Forest Service approval or consideration of the environmental impact statement, the committee will want all the relevant material that is presented at this hearing or is submitted within the 2-week period from the conclusion of this hearing. We'll want all that relevant material to be considered by the regional forester, Tom Coston, before any action finalizing the EIS is taken.

We have, I think, a well-balanced list of witnesess today. We'll ask all of the witnesses to be brief in their remarks so that we will have time for developing questions. Sometimes the questions and the answers are more enlightening on the very points we're most interested in.

Our first witness will be Mr. Peter Johnson, Administrator of Bonneville Power Administration and he's accompanied by Mr. Jerry Frick and Mr. Omar Halvorson and who else?

Mr. WILKERSON. Ron Wilkerson.

Senator MELCHER. Ron Wilkerson, all of the Bonneville Power Administration. Proceed, Mr. Johnson.

STATEMENT OF PETER T. JOHNSON, ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION, DEPARTMENT OF ENERGY, ACCOMPANIED BY JERRY FRICK, ENGINEERING MANAGER, OMAR HALVORSON, ASSOCIATE GENERAL COUNSEL, AND RON WILKERSON

Mr. JOHNSON. Thank you, Senator Melcher. It's a pleasure for us to be here today in order to share with you information about this line so important to the State of Montana. I am Peter T. Johnson, the Administrator of the Bonneville Power Administration, an entity of the Department of Energy. I am pleased to have this opportunity to appear before you to discuss Bonneville's program and activities. It is a pleasure to inform you on the status of our program, the problems we have encountered, and the progress that we have made toward solutions.

In my statement today, I will highlight our progress in constructing the Colstrip transmission facilities in the State of Montana and tell you how the Bonneville Power Administration is responding to a number of legitimate concerns about these facilities. These concerns have been expressed by Montana's public officials, local communities, individual landowners, or the general public.

First as to the status of the construction and the siting of this transmission line. Contractor's crews began constructing the Garrison substation and two segments of the double-circuit, 500,000-volt transmission lines between Townsend and Garrison in mid-July. This work is being accomplished under three separate contracts. The actual construction of these facilities began after easements were received from the Montana State Land Board, a board of natural resources and conservation, and determined that the Bonneville transmission lines are in compliance with the substantive provisions of the Montana Major Facilities Siting Act. This findings, however, did not include the proposed Missouri River crossing. This crossing will not be built until the issue of its location is resolved.

We are now in the process of awarding a fourth contract for the third and the final segment of the transmission lines from Townsend to Garrison. Bonneville Power Administration expects the circuits to be completed before October 1983 when Colstrip generating unit No. 3 is scheduled to begin producing electricity. The total length of this section is approximately 97 miles.

As you know, these circuits are to be extended from Garrison west to the existing 500,000-volt line serving northwestern Montana. One circuit will continue to the vicinity of Spokane. At the present time, we are evaluating alternative routes from the section from Garrison west, a section which is approximately 260 miles long and which is broadly referred to as the Garrison-Spokane section. Several feasible alternative routes are now under consideration. The final selection of the route from Garrison to Spokane has not yet been made.

Mr. Jerry Frick, Project Manager for the Colstrip facilities, who you introduced a moment ago, is here today. Mr. Frick is prepared to discuss the progress of siting and construction in detail and will do so at the conclusion of my remarks.

Let me address, however, the critical importance of this Colstrip transmission line.

Electric loads in the Pacific Northwest are growing at a slower rate than was predicted in load projections in the early 1970's. This rate of growth and the lower forecasts that are being made in the future years have prompted many persons to question the need for generating resources and transmission facilities scheduled for construction in the next 10 years.

I wish to emphasize here today that the Pacific Northwest faces significant deficits of energy in the late 1980's and in the 1990's. The Colstrip generating resources and Colstrip transmission lines, without which the electricity produced cannot be conveyed to load centers, have figured prominently in every analysis of resource and transmission requirements made in recent years.

Without Colstrip generating units 3 and 4, the region under some forecasts would face deficits of firm power as early as 1983, which is just next year. In other words, without Colstrip units 3 and 4, we go from a surpluse to a deficit situation.

All of the studies made have assumed that Colstrip units 3 and 4 will come on line as presently scheduled. Our analysis indicates also that Colstrip units 3 and 4, which are now about 60 percent complete, are also cost effective. Any delays in the construction will surely increase the long-range costs of power required for Northwest loads, particularly those in the State of Montana.

In addition to transmitting the output of Colstrip units 3 and 4, the Colstrip transmission facilities will strengthen the transmission system within the State of Montana and the outages of loss of load will be reduced. The length of service will be impaced, for example, from Missoula, Anaconda, and Great Falls and their surrounding areas. Additional transmission will be available for emergency power transfers of various kinds.

A significant portion of the output for the Colstrip generating units 3 and 4, which have a rated capacity of some 1,400 megawatts, will go to consumers in the State of Montana. To investor-owned utilities who are participating in the construction of these units, mainly the Montana Power Co. and Pacific Power & Light Co. serve retail users of electricity in this State. We estimate that the Colstrip lines will supply some 560 megawatts with the Montana loads of these two companies. Present loads of Pacific Power in the northwest Montana area are being served from the west coast at the present time by generation that includes a large coal fire generating plant at Centralia, Wash., which is just south of Seattle.

Recent discussions between the Western Area Power Administration, more commonly referred to as WAPA, and the Bonneville Power Administration—we are both Federal—have focused on benefits of Colstrip transmission to WAPA and its 10 utility customers in eastern Montana. The Bonneville Power Administration staff members have been meeting with WAPA members to discuss the differences in stream flows on the operation of the Columbia and Missouri hydrosystems. These differences will permit exchanges and sales of power between WAPA and the Bonneville Power Administration, all to benefit ratepayers in the State of Montana.

It appears that about 200 megawatts is available for exchange. This figure, incidentally, closely approximates the unused capacity projected for these lines when they are completed. This capacity will be available to transmit displacement power and will also provide purchasing flexibility and benefit WAPA customers by making surplus secondary power from the Columbia River Power System available to them. Both hydrosystems will become more efficient. River operations will be improved.

May I speak for a moment to our new Pacific Act passed in December of 1980?

Almost 2 years have passed since the passage of this important act. This legislation, which is known as the Regional Act, has drawn Montana closer to her three sister States in the Pacific Northwest Region. Benefits including greater amounts of low-cost power from the Federal Columbia River Power System are being extended to Montana. The Regional Act authorizes an exchange of power for the region's investor-owned utilities to provide rate relief to residential and farm customers. Montana Power Co. and the Pacific Power and Light Co. are among the utilities who have been offered contracts under this exchange arrangement by Bonneville. Both of these utilities

serve homes and farms in the State of Montana. This arrangement, in effect, melds the higher and the lower cost supplies of energy. As a consequence of the Regional Act, Pacific Power signed an exchange agreement with the Bonneville Power Administration. Between October 1981 when they signed this agreement and July 1982, Pacific Power's Montana customers have received more than $15 million in benefits. The Montana Power Co. has not yet signed an exchange agreement, simply because their rates are lower than the average rates of the Federal-based system at this time.

Let me speak generally to the concerns of Montana and its citizens. The Bonneville Power Administration is striving very hard to address the concerns of Montana, its people, its elected officials, and its government with respect to the Colstrip project. We established a field office in Missoula in May 1981. The office has since become an important source of information for local individual's groups and communities. It has given the Bonneville Power Administration a point of contact and that has improved our understanding of Montana's concerns. Often, our staff in Missoula has forwarded information on local concerns to the senior staff in Bonneville's headquarters in Portland enabling BPA to respond more quickly.

We have since transferred the district office to Missoula, which is more centrally located than Kalispell, which was our previous location. It is a more convenient location for those persons who are affected by the Colstrip facilities. Also, a recent analysis showed that travel cost of the entities who do business with us could be reduced if the Montana district office were, in fact, moved to Missoula.

Our Missoula staff periodically publishes a newsletter which is sent to some 2,500 residents, landowners, and groups throughout the State of Montana. This newsletter has been well received because it is a source of factual information about Bonneville's policies, plans, programs and progress. As a result, the Bonneville Power Administration relationships in the State have greatly improved. They're not as good as we want them to be, but we believe there has been significant improvement.

Numerous meetings have been held in Montana since the Colstrip transmission project was first initiated more than 9 years ago. We have compiled a chronological list of all the Montana group hearings, group discussions, and public meetings that BPA responded or participated in during the past 4½ years. A total of 149 such meetings were held in 27 communities in the State. I will list these meetings for the record. I have submitted them to counsel and they are now in possession of the Senator.

The great preponderance of these meetings were held to discuss the planning of the Colstrip transmission projects, its alternative routings and the environmental factors involved. Other projects discussed included Bonneville's rates, billing credits, energy conservation programs, impact aid, and the power sales contracts. In the main, however, we sponsor these meetings to gather information and comments on possible environmental impacts and to develop a record on which the land management agencies and the Bonneville Power Administration staff, decisionmakers, including myself, could base their decisions with respect to the choice of route. These decisions, of course, are also being based on engineering and economic considerations. Our objective is to choose the most acceptable route for reliable, cost-effective transmission facilities.

In response to public concerns, the Bonneville Power Administration has made a significant number of substantial routing changes. These changes have added more than 7 miles of transmission line and some $5 million in additional costs to accommodate concerns raised by Montana landowners.

Other changes have been made near the Missouri River and the Birken Flats. These changes did not significantly add to line lengths nor their costs, but they did result in scheduling impacts and resurveying costs. Many individual structures along the line were located in consultation with affected property owners in an attempt to minimize impact on existing land use.

In addition to the record of formal and informal public meetings, our staff in western Montana has recorded more than 700 personal mail or telephone contacts with individual landowners and other concerned Montanans over the last 2 years. We have a toll free line which the parties can use to call the Bonneville Power Administration with any concern they may have. Unrecorded contacts probably boost this total number to well over 1,000.

I'd like to speak now generally to our relations with the State of Montana.

Since becoming the Bonneville Administrator in May of this last year, I emphasize the need for Bonneville to continue its strong commitment to involve State governments within the region we serve in the evaluation of siting of transmission facilities, and this goes to the States not only of Montana but Oregon, Washington, and Idaho as well. We worked hard in past months in developing partnership with Montana's Board and Department of Natural Resources and Conservation, its Board and Department of Health and Environmental Sciences and its Department of Fish, Wildlife, and Parks. This effort has had a significant and almost continuous impact on the agency's staffs, funds and involvement with the public. I will report later other steps to assist the State in its evaluation efforts and to determine Bonneville's compliance with substantive standards of the State's Major Facilities Siting Act. The Bonneville Power Administration recently entered into an agreement with the State to provide $370,000 to facilitate the State's review.

Let me speak to impact aid. This is a provision of the new Regional Power Act.

Under current law, the Bonneville Power Administration is not authorized to make payments in lieu of taxes. However, following passage of the Regional Act, it has the authority to make impact aid payments. We are in the process of implementing an impact aid program at this time. Pursuant to this authority, the Bonneville Power Administration initially proposed to local governments that impact aid be a reimbursement for actual costs. After analyzing this proposal, local entities objected to this approach and proposed a number of changes.

Gov. Ted Schwinden, Secretary of State Jim Waltermier and Attorney General Mike Greeley were instrumental in improving the original concept. Each of these officials asked us to simplify our approach, which they said was too bureaucratic, and thus ease the burden that would be placed on local governments. We did this, we reopened that process in order to take this information and give it proper con-

sideration. Governor Schwinden suggested that provision be made for payments for local governments which experience exceptable costs due to BPA facilities. This, too, has been arranged. In these and other modifications the Bonneville Power Administration has attempted to serve the best interests of the local governments within the context of the law that we must administer.

The new approach improves the process of making payments to local governments by easing these payments and folding them into a mathematical formula. The payments will be based on cost, but will be estimated for administrative convenience. BPA anticipates that the payments will be made prospectively. In other words, in advance, with any adjustments taking place at the end of the payment year. Any local government that has direct costs greater than the formula payment need only identify these to BPA to receive payment. Therefore, the underlying formula would be developed on information which will be submitted by these local governments to the Bonneville Power Administration.

We intend to announce a revised impact aid proposal within the next 2 weeks. It, like our previous proposal, will be subjected to public review and comment. The goal of this program is to properly compensate local governments for line construction impacts as provided by the law.

Bonneville Power Administration's fiscal responsibility to its ratepayers throughout the four-State region cannot be compromised. Hence, any aid formulas must meet the test of prudent fiscal management. The Bonneville Power Administration has collaborated with the State of Montana in drafting a memorandum of understanding which is to go into effect when Gov. Ted Schwinden and I sign it on August 31, 1982.

The memorandum provides a basis for more explicit agreements. One such agreement, an agreement to fully cooperate by jointly studying and evaluating alternative locations for transmission lines, has already been developed. It will also become effective on August 31. The memoradum is an example of how BPA in the past year or so has intensified its efforts to work harmoniously with the State of Montana. We seek a relationship in which there is a true spirit of cooperation. We believe our program is matched by similar intentions on the part of the State. We believe this mutual effort is succeeding. In my mind it's the only way to do business.

To this end, Bonneville Power Adminjstration recently established an office in Helena and Mr. Randy Moy, a former administrator in the State department of natural resources and conservation, is in charge of that office coordinating our activities with State officials and agencies. Mr. Moy's presence in Montana's capital city should be helpful to all parties concerned.

Although the office in Helena is new, its location there is consistent with the BPA tradition in that the agency has continually sought the advice and the counsel of other government entities. You may recall that the steering committee for the Garrison-Spokane environmental impact statement involved a number of agencies. They included, for instance, U.S. Forest Service, the Bureau of Land Management, the State of Montana, State of Idaho, the Bureau of Indian Affairs, Confederated Salish and Kootenai Tribes of the Flathead Reservation, U.S. Fish and Wildlife Service, the Army Corps of Engineers, Na-

tional Park Service, Washington Water Powers Co., as well as the Bonneville Power Administration.

Let me speak briefly about the impact of this transmission line on the employment within the State of Montana. Bonneville's activities in Montana are a source of local employment. About 230 persons have been hired within Montana for the construction program already. The total number of persons already at work on the construction project numbers 387.

When the construction program reaches its peak, the number of persons hired locally is expected to rise to 475. At this same peak of construction, the total number on the job will total 650.

We expect the number of construction workers to total more than 1,000 and stay above that level through 1985 and 1986 after work gets underway. I think it's safe to multiply this number by a factor of at least two to estimate the total employment impact in the State of Montana.

In addition to these jobs, we estimate that Bonneville's program to promote the conservation of energy has resulted in another 45 jobs. These efforts stem from the Regional Power Act. The number will grow as the conservation programs expand. These people are employed by local utilities and contractors to replace street lights with a record of high energy use, to wrap hot water heaters, to insulate homes, to install storm windows and to do other work.

Bonneville is presently providing $250,000 to the department of natural resources and conservation to promote energy conservation, once again, a provision arising out of the regional act. The department will work directly with local governments, small consumers and electric cooperatives in this particular program.

In addition, Bonneville has also provided $150,000 to the department to determine the cost-effectiveness of converting biomass, especially wood residues in western Montana, to an energy source. Once again, this is an authority that arises under the Regional Power Act recently passed.

Bonneville Power Administration is participating with the Montana Department of Fish, Wildlife and Parks and the U.S. Forest Service in an elk study. Bonneville has provided $100,000 to monitor the effects of Colstrip transmission on the elk herd near Boulder. Bonneville has also furnished $340,000 this fiscal year for two ongoing fishery studies and plans to add to this sum in the future. One of these studies addresses the cumulative fish and wildlife impact of small hydro sites on the Swan River. The other addresses effects of the operations of Kerr and Hungry Horse Dams on reproductive success of Kokanee in the Flathead River system. This arises under that provision of section 4 of the Regional Power Act dealing with enhancement and improvement of our fishery and wildlife resources.

In conclusion, Senator, I would like to refer to my opening topic, the status of Colstrip transmission construction and introduce Mr. Jerry Frick, the project manager, an engineer for the Bonneville Power Administration's Colstrip facilities. Mr. Frick can bring you up to date on the Townsend-Garrison section and the evaluation of alternative routes from the Garrison to Spokane section. Thank you, sir.

[The attachment to Mr. Johnson's statement follows:]

MEETINGS WITH MONTANA GOVERNMENT BODIES
ASSOCIATIONS, AND THE GENERAL PUBLIC

Concerning the Colstrip Transmission Project
1978-1982

Date	City	Entities Involved or Nature of Meeting
2-22-78	Helena	Montana Department of Health and Environmental Sciences
3-20-78	Pablo	Confederated Salish & Kootenai Tribal Council
9-19-79	Missoula	Public Scoping Meeting
11-07-79	Missoula	Data collection meeting with local agencies
11-08-79	Missoula	Data collection meeting with local agencies
12-04-79	Superior	Mineral County Officials
12-05-79	Thompson Falls	Sanders County Officials
12-??-79	Thompson Falls	Meeting with land-use planning, local government officials
12-07-79	Missoula	Missoula Planning Board
12-20-79	Helena	Lieutenant Governor and State Legislators
1-16-80	Pablo	Confederated Salish & Kootenai Tribal Council
1-18-80	Pablo	Confederated Salish & Kootenai Tribal Council
1-31-80	Boulder	North Boulder Protective Association
2-07-80	Deer Lodge	BPA Public Workshop
2-08-80	Townsend	BPA Public Workshop
2-09-80	Boulder	BPA Public Workshop
2-11-80	Helena	Senator Baucus, North Boulder Protective Association, and State Representatives
2-28-80	Helena	Governor and Staff
3-05-80	Boulder	North Boulder Protective Association

Date	City	Entities Involved or Nature of Meeting
3-06-80	Drummond	Messrs. George and Rick Lacey (Later formed the Upper Clark Fork Protective Association)
3-20-80	Noxon	BPA Public Workshop
3-24-80	Thompson Falls	BPA Public Workshop
3-25-80	Missoula	BPA Public Workshop
3-26-80	Superior	BPA Public Workshop
3-27-80	St. Ignatius	BPA Public Workshop
5-01-80	Missoula	Lincolnwood Homewoners Association
5-03-80	Drummond	Senator Baucus, Congressman Williams, Clark Fork Basin Protective Association, Deer Lodge Valley Resource Association, and North Boulder Protective Association
5-13-80	Boulder	Jefferson County Planning Commission
5-14-80	Boulder	North Boulder Protective Association
5-16-80	Deer Lodge	Deer Lodge Valley Resource Association and Western Environmental Trades Association
6-04-80	Milltown	Hellgate Pines Homeowners Association
6-06-80	Helena	Representatives of Senator Melcher
6-16-80	Deer Lodge	Deer Lodge Valley Resource Association
6-18-80	Boulder	North Boulder Protective Association
6-27-80	Helena	Western Environmental Trades Association
7-11-80	Missoula	Secretary of Clark Fork Basin Protective Association
7-16-80	Helena	Montana Department of Natural Resources and Conservation and State Representatives
7-18-80	Deer Lodge	Senator Melcher and Deer Lodge Valley Resource Association
8-05-80	Townsend	BPA/Forest Service Public Meeting

Date	City	Entities Involved or Nature of Meeting
8-06-80	Deer Lodge	Engineers for Powell Board of County Commissioners
8-14-80	Missoula	Public Meeting Sponsored by Missoula Board of County Commissioner
8-26-80	Milltown	Hellgate Pines Homeowners Association
10-06-80	Missoula	Lincolnwood Homeowners Association
10-15-80	Butte	Senator Melcher and Forest Service/Bureau of Land Management Representatives
11-19-80	Deer Lodge	Senator Melcher and Deer Lodge Valley Protective Association
12-27-80	Drummond	Senator Baucus' Staff and Upper Clark Fork Protective Association
1-06-81	Drummond	Upper Clark Fork Protective Association
1-07-81	Helena	Montana Department of Natural Resources and Conservation
1-08-81	Helena	Senator Baucus' Staff and Montana State Officials
1-21-81	Missoula	Board of Missoula County Commissioners
2-05-81	Missoula	Board of Missoula County Commissioners
2-09-81	Helena	Lieutenant Governor and Staff
2-17-81	Kalispell	Flathead Valley Community Meeting
2-18-81	Drummond	Upper Clark Fork Protective Association
2-18-81	Helena	Montana Department of Natural Resources and Conservation
2-19-81	Helena	Montana Congressional Delegation
2-19-81	Butte	Silver Bow County Commission Chairman
2-19-81	Boulder	North Boulder Protective Association
2-23-81	Deer Lodge	Deer Lodge Valley Resource Association
2-23-81	Philipsburg	Granite County Board of Commissioners

Date	City	Entities Involved or Nature of Meeting
2-26-81	Anaconda	Anaconda/Deer Lodge City and County Officials
2-27-81	Deer Lodge	Deer Lodge Valley Resource Association
2-27-81	Drummond	Upper Clark Fork Protective Association
3-20-81	Missoula	Missoula County District Attorney and Missoula County Commissioner Conrad
3-24-81	Deer Lodge	BPA Public Meeting
3-25-81	Boulder	BPA Public Meeting
3-26-81	Helena	Officials of the Montana Department of Natural Resources and Conservation
4-21-81	Drummond	Upper Clark Fork Valley Protective Association and Drummond Area Landowners Group
4-22-81	Missoula	Upper Clark Fork Valley Protective Association and Senator Baucus
4-23-81	Missoula	Upper Clark Fork Valley Protective Association, Lincolnwood Homeowners Association, and Touchette homeowners
4-23-81	Missoula	Senator Baucus in Missoula Town Hall meetings
5-06-81	Missoula	Missoula County Commissioners and Marjorie Harper of the Clark Fork Valley Protective Association
5-18-81	Missoula	Meeting with publishers of newspapers in Missoula, Philipsburg, Anaconda, and Deer Lodge
5-18-81	Drummond	Garrison-Spokane scoping meeting
5-19-81	Clinton	Garrison-Spokane scoping meeting
5-20-81	Potomac	Garrison-Spokane scoping meeting
5-21-81	Lolo	Garrison-Spokane scoping meeting
5-27-81	Frenchtown	Garrison-Spokane scoping meeting
5-28-81	Missoula	Garrison-Spokane scoping meeting
6-02-81	Gold Creek	Meeting with residents to discuss the Garrison Substation location

Date	City	Entities Involved or Nature of Meeting
6-04-81	Superior	Mineral County Commissioners
6-05-81	Polsen	Lake County Commissioners
6-09-81	Thompsen Falls	Sanders County Commissioners
6-10-81	Missoula	Residents of Rattlesnake area
6-18-81	Noxon	BPA open house
6-22-81	St. Ignatius	BPA open house
6-23-81	Superior	BPA open house
6-24-81	Thompson Falls	BPA open house
6-25-81	Plains	BPA open house
6-26-81	Maxville	Friends of the Rattlesnake
7-07-81	Maxville	Residents of the Maxville area
7-09-81	Maxville	Ledbetter ranch owners
7-15-81	Maxville	Toll free number for use by Montana residents put into service at Missoula office
8-26 thru 30-81	Missoula	BPA display at Missoula County Fair
8-31-81	Missoula	Missoula County Commissioners
9-30-81	Missoula	Missoula Rotary Club
9-30-81	Missoula	Law class at University of Montana Law School
10-07-81	St. Regis	St. Regis area residents
10-08-81	Deer Lodge	Powell County Commissioners
10-14-81	Missoula	Missoula County attorney and city-county Air Quality officials
10-19-81	Superior	Mineral County Commissioners
10-28-81	Missoula	Miller Creek area residents
12-29-81	Missoula	Residents of Rattlesnake area, Miller Creek area, and St. Regis

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Date	City	Entities Involved or Nature of Meeting
12-29-81	St. Regis	Residents of Rattlesnake area, Miller Creek area, and St. Regis
1-16-82	Ninemile	Resident of the Ninemile area
2-23-82	Drummond	Granite County Commissioners
2-10-82	Missoula	League of Women Voters
2-16-82	Deer Lodge	Community Development Committee made up of Federal agency representatives
3-24-82	Missoula	Miller Creek residents
3-25-82	Hall	Granite County Alliance
4-01-82	Missoula	Public Meeting
4-06-82	Polson	Lake County Commissioners
4-06-82	Thompson Falls	Sanders County Commissioners
4-07-82	Philipsburg	Granite County Commissioners
4-07-82	Missoula	Rodeo Ranchettes residents
4-08-82	Missoula	Missoula County Commissioners
4-08-82	Superior	Mineral County Commissioners
4-15-82	St. Regis	Public Meeting
4-19-82	Missoula	Public Meeting
4-20-82	Drummond	Public Meeting
4-21-82	Lolo	Public Meeting
4-22-82	Philipsburg	Public Meeting
4-26-82	Frenchtown	Public Meeting
4-27-82	Superior	Public Meeting
4-28-82	St. Ignatius	Public Meeting
4-29-82	Plains	Public Meeting
4-30-82	Potomac	Public Meeting

Date	City	Entities Involved or Nature of Meeting
5-03-82	Thompson Falls	Public Meeting
5-05-82	Superior	Mineral County Commissioners
5-24-82	Missoula	Public Meeting
5-25-82	Thompson Falls	Public Meeting
5-25-82	Superior	Public Meeting
5-26-82	Townsend	Public Meeting
5-26-82	Boulder	Public Meeting
5-27-82	Phillipsburg	Public Meeting
5-27-82	Deer Lodge	Public Meeting
6-08-82	Missoula	Public Meeting
6-09-82	Missoula	Missoula City/County Planning Staff
6-10-82	Pablo	Confederated Salish and Kootenai Tribal staff
6-16-82	Hall	Granite County Alliance
6-15 thru 16-82	Helena	Montana DNRC staff
6-28-82	Missoula	Public Meeting
6-29-82	Missoula	Congressional Field Staff and Missoula County Officials
7-01-82	Helena	Montana State Elected Officials
7-14 thru 15-82	Helena	Montana DNRC staff
7-19-82	Missoula	Public Meeting
7-19 thru 21-82		Montana DNRC staff fly over route alternatives
8-02-82	Boulder	Boulder City Officials
8-16-82	Deer Lodge	Powell County Commissioners

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Senator MELCHER. Thank you, Mr. Johnson. I think before we hear from Mr. Frick on the engineering aspect of it, we might as well make some inquiries right now on some of the points that you raised in order to make our transcript read better.

You mentioned the Northwest Power Act at least a half a dozen times, perhaps more. In various aspects of it, all of the points that you brought up under the Northwest Power Act allow you certain amount of leeway and discretion in the implementation of the act, do they not, Mr. Johnson?

Mr. JOHNSON. Senator, there is room for judgment, yes, sir.

Senator MELCHER. The Administrator under the Northwest Power Act is given a new framework in which to exercise his own judgment; is that not correct?

Mr. JOHNSON. The Administrator, the authority of the agency and its administrator have been expanded.

Senator MELCHER. Greatly.

Mr. JOHNSON. The scope of the agency role is vastly greater. There are more puts and calls on the Administrator perhaps than there have ever been because of the conditions of the act. It's a very complex act as we both know.

Senator MELCHER. I'm not much of a fan of that act. You mentioned conservation. Haven't you got an application before the FREC now, the Federal Regulatory Energy Commission, to raise the power rates for the aluminum plant at Columbia Falls? What are those contracts at right now? Seventeen and one-half mills per kilowatt?

Mr. JOHNSON. The increase to the rates to industrial customers is 50 percent and is rising to 25.9 mills.

Senator MELCHER. That would be about the greatest conservation that will be enacted, will it not, if that plant shuts down because of the increase in the charge for Bonneville Power?

Mr. JOHNSON. The Bonneville Administrator is charged under all the laws that I must follow to manage the affairs of the agency in a prudent and businesslike fashion. The rate process, which is extensive, involves many hearings, much testimony and public discussion and was comprehensive and very detailed. These rates are a consequence of the public process and supported by a very detailed and thorough cost analysis. The rates ultimately and hopefully generate the revenues necessary to cover the costs of the agency. As you're aware, costs of generation are increasing greatly, particularly because of the net-billed projects being acquired by Bonneville from the Washington Power Supply System—WPPSS. These more than any other single factor, have driven the costs up not only of our industrial customers, but also of our preference and priority customers, the public customers in the State of Montana. These rates increased 60 percent. It's a disappointment to me as it is to everyone, but it's a reality that we all have to deal with.

Senator MELCHER. Well, certainly the reality setting down the operation of that aluminum plant is a very serious reality. At what point, if ever, did Bonneville or specifically you, Mr. Johnson, discuss with the management of that aluminum plant the 26 mills proposed in the application before the Federal Energy Regulatory Commission?

Mr. JOHNSON. The rates were associated with a record of decision which was signed by the Administrator 2 weeks ago. These rates are

to be effective on October 1. Ratemaking is subject to vast public review, debate, testimony. The record is extensive and I'm sure, and I believe you're referring to rates for the direct service industry; is that correct sir?

Senator MELCHER. And ARCO, whatever you want to call it. The operators, the management of the aluminum plant at Columbia Falls.

Mr. JOHNSON. I don't remember discussing personally with those persons. But their representatives were present on many occasions in Portland to discuss this matter not only in these formal hearing processes but privately as well. They did complain of the impact, the prospective impact upon all of their affairs, this is with Alcoa as well as Kaiser and Reynolds Metals and the other direct service industries. The rate increases that were being discussed during the rate process. The impact is great, there is no denying that.

Senator MELCHER. They tell me that 26 mills is the range that was discussed, was between 17½ and 22 mills per kilowatt-hour. Is that incorrect, what they told me?

Mr. JOHNSON. Our regional estimate was closer to the 22 mills, yes.

Senator MELCHER. Well, is it correct or is it not correct that in direct discussion with them, the discussion was between 17½ and 22 mills?

Mr. JOHNSON. Well, our regional estimate, in my recollection, sir, was roughly 22 mills. I don't remember the 17½. I believe that rate is in effect at this time.

Senator MELCHER. Was it ever discussed directly with them, in consultation with them directly, going to 26 mills in your application?

Mr. JOHNSON. The analyses and the financial studies that determined the rate were discussed in detail with them.

Senator MELCHER. But not the 26 mills then.

Mr. JOHNSON. I would say not that specific number.

Senator MELCHER. Mr. Johnson, I think that act allows you a great deal of power and I think it allows you a great deal of leeway in how you interpret the formula, discuss the formula that results in the final application for rate increase. I think that it's an unusual amount of authority to grant to one individual, but there are checks and balances. The first check is the Federal Energy Regulatory Commission and the second check is the interpretation by the courts of the act itself. As I understand the act, consultation directly with the industries involved and with the public groups, like the REA's or what have you, when they're going to have a rate increase, is an absolute essential, and that does not mean an interpretation of what it requires to make a prudent business judgment. What I think it means—what you're talking about—is in cost of mills per kilowatt hours and not just some formula that, after all, does have a little bit of leeway in it for the interpretation and the judgment of the administrator on what's prudent. I think that was a term you used, prudent business judgment. I don't think that's what the act requires completely. I think the act also requires discussing directly what that means in terms of cost to the users. I want to bring this up because I see a great deal of conservation happening. You mentioned WPPSS and the responsibility that Bonneville has to that. It's resulted in a lot of conservation because people can't afford, I think, in many instances, to use sprinkler irrigation any more on the REA lines. It's too costly, so it's a big

conservation. If the Columbia Falls plant shuts down, that is massive conservation of electricity in the Northwest. It's also massive unemployment and it's massive economic disruption of the northwestern part of Montana, too.

Are you in favor now of legislation by Congress for payment in lieu of taxes on new transmission lines including these for Bonneville Power?

Mr. JOHNSON. That is a matter, Senator, that has been addressed on two previous occasions. First with passage of the Bonneville Project Act.

Senator MELCHER. Were you connected with Bonneville at that time, sir?

Mr. JOHNSON. I was not, sir.

Senator MELCHER. Were you affected by the act itself in the previous capacity?

Mr. JOHNSON. No, I was not.

Senator MELCHER. Well, so payment in lieu at that time, which was vigorously opposed by Senator Jackson, Senator Magnuson, Senator Hatfield, and Senator Packwood, was not in the bill. Now, that's ancient history. I felt it should have been in the bill. Others in the Northwest thought it should be in the bill, but it is not in the bill. Are you in favor of amending the bill, to come at this head-on and include payment in lieu, and I'll identify payment in lieu, paying taxes just as if it were a transmission line built by a privately owned utility?

Mr. JOHNSON. It's a fair question. I will attempt to respond. The matter has been addressed previously by Congress. I think it is a matter of policy to be established by Congress. It is not a prerogative or authority indirectly or directly that is given to the Administrator. It is obviously a matter that extends beyond the Pacific Northwest and the State of Montana or the State of Oregon or the State of Washington. So I do not believe it would be appropriate for the Administrator to speculate on what that is or what it should be. There are two sides to that issue. Points could be made on both sides. I do believe that it's important, however, in connection with that subject and the question that you asked, that Bonneville Power Administration stands ready to submit any information that would help to affect legislation, this policy that has been established by Congress. But I have no opinion myself, personally.

Senator MELCHER. At this time, you're not in favor of it?

Mr. JOHNSON. I didn't say that. I said that I have no opinion, sir.

Senator MELCHER. You have no opinion. As Administrator, would you oppose WAPA—the Western Area Power Authority—from providing that feature? Are you in the legislation affecting that?

Mr. JOHNSON. That would be their business and not mine.

Senator MELCHER. I'm relieved to hear you say that because that particular provision was opposed by Bonneville Power in legislation affecting WAPA a couple of years ago. WAPA had recommended it; they had drafted language that said explicitly that they would pay taxes on any new transmission line built from henceforth, just as if it were a privately owned utility. The problem we had in moving their legislation did involve payment in lieu because at Bonneville, they did not like it; it was a precedent. They would not welcome it. I

expect to see payment in lieu enacted sometime in the near future by Congress and certainly it's high time, but certainly this case we have before us, Bonneville building this line from Townsend west rather than Montana Power building it, points to the need of putting everybody on the same footing in these transmission lines.

Public testimony at this long list of public meetings and semi-private meetings, at places like Missoula, St. Regis, Superior, other points in Frenchtown, other points in western Montana brought out the apprehension about what Bonneville might do with this particular line?

Mr. JOHNSON. I know there have been concerns expressed. I would yield to Mr. Frick or Ron Wilkerson to expand on that.

Senator MELCHER. We'll get to them later, but it has come to your attention.

Mr. JOHNSON. Yes, sir.

Senator MELCHER. Has it also come to you attention that one or more contractors, in the Boulder area have stated that they had the right of eminent domain, condemnation of land, if the landowner would not cooperate?

Mr. JOHNSON. I am not aware of that circumstance, instance, or any conversations in connection with this. I would again be happy to refer to Mr. Frick; he would have firsthand knowledge.

Senator MELCHER. We'll go to Mr. Frick, too. I was just wondering if complaints were lodged. I know myself from conversations with landowners in Boulder that were threatened. If there wasn't adequate cooperation and acceptance of the price offered for right-of-way for a road, the contractor would use his right of eminent domain. I wondered whether you people were aware of that.

Mr. JOHNSON. There were allegations several months ago that improper approaches were being made to landowners on a number of different issues. We have spoken about that internally and frankly. We'll have no part of that. We're interested in getting all the information we possibly can. Obviously, we're dealing with matters where there are more than one side to an issue, and they're very sensitive. But I personally would have no part of anyone engaging in a threat. If I were to learn about it, I'd take immediate appropriate action.

Senator MELCHER. Was any of the steel, or a significant amount of the steel, involved in the present construction, imported steel?

Mr. JOHNSON. Yes; I think there is some $16 million of the actual transmission towers, 16 million dollars' worth of steel have been purchased, roughly half of which were supplied by a Japanese firm. The total project from Garrison-Townsend to Garrison section was a total cost of some $87 million so that estimate is roughly 10 percent of that project.

Senator MELCHER. Does it represent half of the steel in the towers?

Mr. JOHNSON. Of the transmission tower and the structural steel in the transmission towers. It doesn't include the conductor or the other pertinent materials.

Senator MELCHER. Are there any of the other materials that will be used in that construction that are not American or are imported?

Mr. JOHNSON. Yes; there's a small quantity of foreign purchases for other purposes. For example, in the construction of the substation. Would you like specific details?

Senator MELCHER. No, no; I just want to get some idea of whether it's domestic or imported. About half of the steel for the towers is imported steel and the other half is American.

Mr. JOHNSON. It is American and domestic steel. May I have a moment to expand on that? There is a legal provision that applies to the contracting procedures of the Bonneville Power Administration. A Federal agency can give a 6-percent preference to American suppliers. That was applied in all of these instances, and it still resulted in this particular Japanese supplier being the lower bidder. In addition, we were able to place significant amount of the work with the small business contractor. The contractor had the work done in an impact area that had chronic unemployment, so he got a total of a 12-perecnt advantage in the bidding process and was awarded a significant portion of the contract. But, you know, there is another thing that is of concern to me personally. In my private life before becoming the Administrator of Bonneville, I did construct transmission lines. And at that time, this was some 15 or 20 years ago, it was known that the Japanese had made further progress, technically. They were able to bring several pieces together in the assembly process, a thing we couldn't do in America. This was a disappointment to me. So, not only are they the lowest bidder, but they are providing a superior product.

Senator MELCHER. Well, as is being demonstrated now, before the group on regulation of unfair trade practices by countries that export to us, if the government involved that wants to move the product wants to subsidize it, it becomes a great deal cheaper and it allows for all sorts of refinements that seem to be superior to our own technology. In this country, we haven't bought the line that we're going to subsidize our basic industries, so we often find ourselves at a disadvantage, but I'm not holding you responsible for that, Mr. Johnson. That comes more under the responsibility of Congress than it does in Bonneville. I would imagine—I'll ask you. Are you required to take the low bid?

Mr. JOHNSON. Yes, we are. Low responsive, responsible bidder. That's all fairly well defined in the Federal regulations.

Senator MELCHER. One last question. Mr. Johnson, are you resigned or I'll put it in the positive, would you welcome a solution for the routing of the line between Garrison and the Montana border that does not involve any of the pitfalls that I read off at the beginning; impact on private property, undesirable and not welcome, recognition of aesthetic and scenic values, both on Federal and private land and the private owners of land and particularly homeowners in the final selection of a route for this portion of your line?

Mr. JOHNSON. I would say in general to that question, yes, sir. The first point that you made——

Senator MELCHER. Granted it's going to cost more.

Mr. JOHNSON. Cost is certainly a factor. We must, as I say, manage the affairs of the agency in a prudent businesslike fashion. So the economic considerations are necessarily a factor. The first item that you mentioned was agricultural. We try to avoid going across irrigated crop land and I am informed that you personally gave advice to us regarding the Deer Lodge area. A number of transmission lines, not only within the State, but outside the State, have been influenced by that advice from you. In addition to that, the interest of private

property owners and the use of public lands must be weighed as a public process along with technical considerations, environmental considerations and finally, of course, economic considerations.

Senator MELCHER. I don't know how you amortize this line, but you can tell me.

Mr. JOHNSON. I believe it's over 35 years, am I correct? Thirty-five years is the amortization of the transmission line.

Senator MELCHER. The line will last much longer than 35 years, will it not?

Mr. JOHNSON. They seem to be surviving longer than that, yes.

Senator MELCHER. The rule of thumb is what, 56?

Mr. JOHNSON. I've heard the speculation with respect to dams. By law, we are required to amortize them within a 35-year period, dams in 50 years and I've heard dams are expected to exceed 100 years in their purpose and application. I've heard no speculation how long the transmission would last. It probably would vary by its design. A wood frame construction would be different than a steel framed construction.

Senator MELCHER. Well, I'm only speaking about steel frame because that's all we're talking about, is it not?

Mr. JOHNSON. Yes, in the State of Montana, the Colstrip line is steel.

Senator MELCHER. Would 50 to 60 years be a conservative estimate of longevity?

Mr. FRICK. Yes.

Senator MELCHER. So, based on ABPA policy, but not what the law requires, you'd amortize the towers for ratemaking purposes in a shorter period. By the way, that could have been revised in the Northwest Power Act if it was, if it had been recommended. Again, I'm not holding you responsible for what Bonneville did before you were connected with Bonneville, but 35 years for these steel tower lines amortized in that short period when they expect to last and be used for 50 to 60 years? It doesn't make much sense. It makes the rates higher and distorts what we're talking about because we're talking about something that's going to last 50 to 60 years and be utilized during that period of time. Perhaps even that's a very conservative period of time. It might be 70 to 80 to 90 years, the cost of the initial routing becomes less significant and the impact on it changes what a prudent business judgment would be. You then mentioned undergrounding lines. I've known Bonneville's answer but I'll ask it again today to see whether it's any different.

Mr. JOHNSON. I think the record is still open on that subject, Senator, and we'll——

Senator MELCHER. We hope to receive some testimony today about what the possibilities are of undergrounding any portion of the line, whether it's one-half mile, 1 mile, 2 miles or what have you, but please give me your latest judgment on it.

Mr. JOHNSON. Well, I'm aware that this is very important to the State of Montana, particularly in the vicinity of Missoula here, that it is under consideration, that the matter has not been closed. I would urge you to ask Jerry Frick more detailed questions about this, Senator. I'm informed, however, that it is someplace in the range of 9 to 10 times as expensive. I'm also aware on a first-hand basis of the dif-

ficulty, perhaps you are too, that the Bureau of Regulations had in the Grand Coolee Dam where a buried cable caught fire. It's been a year out of operation since that accident. So this raises grave questions about the reliability of a line that is placed underground. I don't say that as an answer. I'm just saying that those are considerations that must be taken into account as we evaluate what is, in fact, our best and most prudent choice.

Senator MELCHER. I think the person to ask this would be Mr. Frick, but we will want some information on the danger of fires in relationship to this transmission line regardless of whether it's underground or aboveground. We understand the considerable threat to safety of any individual under the line or near the line in case of fire and we want to be advised on that, we're not of the opinion that just because it's up in the air, that we removed all the danger from fire in the vicinity of the line, but I assume Mr. Frick would be the one to advise us on that; is that not true?

Mr. JOHNSON. Yes.

Senator MELCHER. I think that's all I have, Mr. Johnson. I appreciate your being here with us today. I know you might have to leave by noon for your next appointment, so being here with us this morning is very much appreciated and your testimony is absolutely essential for this hearing record. Thank you very much. Mr. Frick.

STATEMENT OF JERRY FRICK, ENGINEERING MANAGER, BONNEVILLE POWER ADMINISTRATION, DEPARTMENT OF ENERGY

Mr. FRICK. Senator Melcher, Mr. Brown, and other distinguished guests. As Mr. Johnson said, my prepared remarks will cover two general areas in regard to the present ongoing activities on this project. First, I'll cover the ongoing construction on the Townsend-Garrison section and Garrison substation and then second, the planning and analysis covering the facilities west of Garrison to Spokane.

Earlier this year we reached an agreement with Powell County Commissioners to replace one of their existing bridges over the Clark Fork River at Gold Creek. That was the first contract that was awarded on this project. It was required to give access to Garrison substation to some of the heavy equipment that we will be installing there. It was being done at an estimated cost of $840,000. It was done through agreement with the Federal Highway Administration and we expect this work, the county road improvements to be completed by mid-September.

In July, work commenced on construction contracts awarded for the Townsend to Boulder section. We awarded the schedule, the eastern contract, to Irby Construction Co. of Jackson, Miss., for $9,600,000. The Boulder to Black Mountain section was awarded to the Power City Construction, Portland, Oreg., for $12,300,000, and the Garrison substation contract was awarded to Power City Electric of Spokane, Wash., for $4,400,000. The third section of the line we open bids this week on that section line. We would expect to evaluate those over the next week or two and award the contract sometime in September for the final section of the transmission line.

Senator MELCHER. Which section is that?

Mr. FRICK. That would be the section from Black Mountain on into Garrison substation, the outskirts north into the Deer Lodge Valley

south of Garrison, the town of Garrison. On the schedule 1, the construction that we awarded, the contract is to include the area to the Missouri River crossing. That last few miles of that contract we haven't given the notice to proceed to the contract on that. We withheld construction in this area until ourselves, Montana Power and the State department of natural resources and conservation could review location of this crossing. This came as a result of a request from the State and Board. The crossing location issues were reviewed with the affected landowners on July 29 and last Friday Leo Barry and some of his staff were in Portland and met with the chief engineer and myself. We reviewed the analysis and the input from the landowners. Based on these discussions Friday, Bonneville favored construction on our original plan with Montana Power Co., the original crossing because the southern route proposed by DNRC would interfere with proposed irrigation systems that the landowners brought to light in the meeting with landowners on July 29.

I forwarded a letter earlier this week to the State proposing this to the State and it's now under review in part of the natural resources and conservation. We haven't issued any go ahead on that part. We're trying to reach agreement with the State on that before we proceed.

Construction on the contract, as Peter said, started in July. The emphasis for this time has been largely on clearing and road construction. They have started some footing work, excavation for footings and assembly of the steel work and my latest information is that the erection and assembly will be starting. If it hasn't started this week, we'll be starting within the next week or so. Most of the stringing of the conductors in that section will take place next summer. I don't think they're going to progress far enough in winter before this fall to do any actual stringing of the conductors. At the present rate of progress, from talking to the contractors, it appears satisfactory to still meet the fall 1983 energization date of the facilities, although we got started quite late this summer. If we have the normal fall weather pattern here in Montana, which is usually good, we should be able to meet the October 1983 energization date.

Moving on to the second portion, Garrison-Spokane status. The draft EIS for this was issued this spring and was out for public review, as we've discussed earlier, through the end of May. We held 13 public meetings throughout the area, three basic routing alternatives were developed during earlier scoping meeting and working with the steering committee were identified and were reviewed in that draft EIS where they are now in the process of analyzing the input from that review. I'd like to just briefly go over these routes to acquaint you with them. They're shown both on the system map here and also on the more detailed map over there.

The northern route would be a route from Garrison sub. I think it's shown in green on that diagram to the Hot Springs substation. The route shown is on the north side of the Clark Fork Valley, crosses just north of Missoula, and then proceeds parallel to our existing line on the Hot Springs. The alternative of that, also covering the EIS would be to parallel our existing 230 from Garrison sub to Missoula. This appears to be a little higher impact because of the impact in the agricultural area and also the residential impact on the Clark Fork Valley, so it wasn't addressed in the EIS as one of the primary alter-

natives. It is still being covered and will be presented to the decisionmakers of the final analysis. The second route follows that same general route option. It's referred to as the Plains option, just west of Missoula as indicated yellow on the map. It would swing west of the Flathead Indian Reservation, intersect the existing 500-kilovolt line at Plains or near Plains. As indicated, the substation would be developed at that point.

The third alternative that's referred to is the Taft alternative or the southern alternative. It would pass south from Garrison substation slightly south, past the Maxville area, would cross the Bitterroot River near Miller Creek near south of Missoula, just north of Lolo, go through the mountains south of Clark Fork Valley to a point west of here and then cross back between the Nine Mile general vicinity to the north side of the Clark Fork, continue on the north side of the Clark Fork to St. Regis area and cross back across and proceed westerly to the Taft substation which would be the innerconnection point with the existing 500-kV line. On any of these three options, whether we terminated this double circuit at Hot Springs, Plains, or Taft, the single circuit 500-kV line would be built from that point on to the Spokane area to the Bell substation, so there would be double circuit construction to the intercepted point with the existing 500-kV grid and then an additional single circuit section from that intercepted point onto Spokane.

During the public review of the draft EIS, and some came in ahead of that, some line locations were suggested in several areas. They are shown in dotted form on that map and I'd just like to highlight those.

The Maxville area, the route south of Maxville was suggested and our agency also indentified a possible route north of Maxville, although my latest information is that that's going to drop out of consideration, but we are looking carefully at two routes in the Maxville vicinity. There is a suggestion for some alternate center lines just north of Lolo where we cross the Bitterroot River and proceed west up to the hills there. We're looking at two alternatives in that area. We also made some minor centerline adjustments on that route in the Miller Creek area.

The Alberton Nine Mile area, it was a suggested alternate location there. We have looked at those and pretty well decided that the present location is probably the best location right in that area. We haven't completely closed the door on it in that area. That's where we cross back, across the Clark Fork Valley.

In the St. Regis facility, there are two alternative crossings of the Clark Fork. One near the town of St. Regis and one more to the north there shown in dotted on the map. Those are under study at this time and will be given full consideration by the team as well as ultimately brought up to the decisionmakers as to the centerline alternative. We're also looking at some alternate minor relocations of the Taft substation.

On the north route, the suggested centerline deviation was suggested in the Potomac area and that's shown on the dotted map and is being analyzed. These are being analyzed at this time. We're trying to work with some of the people in the field, affected landowners. My latest information is that the specialists will be getting together for their sit down and debate the issues type of meeting and hopefully from that, we'll have some information to come out analyzing the final

routes. That information, where we are working with the landowners, we'll go back and meet with the landowner groups and then will hopefully be presented to the Steering Committee, Interagency Oversight Committee about mid-September, third week of September. That's our present thinking on that. They critique the analysis at that time and we're hoping for somewhere at the end of October to have a preliminary analysis ready to be the first step to being presented to the decisionmakers, which would lead us to a final EIS being documented somewhere around the first of the year or maybe in December, and put it out for review at that time and then the decision early in 1983. We're participating with the Montana Department of Natural Resources and Conservation in this analysis. They just recently joined in this, as Peter said, under a $370,000 contract. We're hoping to have them pretty well up to speed by the end of October so that that preliminary review that occurred at that time can be a joined State-Federal agency review for Bonneville, Forest Service, BLM, and the State would all be listening to all the same material and at that time, asking the staff to develop additional material before we go onto the final decision process and also finalize the EIS.

Surveying activities are underway to finalize where we do have permission to survey this centerline location on all three of these alternate routes. The two northern alternatives, except for that yellow crossover to Plains, pretty well parallels existing lines, so we have more information on those particular routes, so most of our detailed surveying activity is on that southern Taft route, which is the new route being developed, so there is a higher level of surveying activity on that route than on the other two routes, but we're trying to develop final centerline information with the affected landowners and staff, so that at the time of the decision, we will have a pretty finite centerline to make a decision on and not still have some of the questions up in the air. We also hope to finalize where we can have the access roads, which seem to end up being quite a concern to the individual landowners, so we hope we have some of those firmed up by that time, so that also gets into the decision process.

Our present schedule on this section of project would call for awarding clearing contracts next year, 1983, to the spring-summer-fall clearing season and access road construction and award construction contracts to the section to the 500-kilovolt line, either Hot Springs, Plains, or Taft for the 1984–85 construction season to be the fall 1985 energization of the line. The single section on the end to Bell substation would be awarded later and timed for a 1 year later energization. The fall of 1986 is our present planning on that.

This completes my prepared remarks. I'll be glad to respond to any other questions or go into any more detail on these points.

Senator MELCHER. Mr. Frick, have you made application to the appropriate secretary for right-of-way or are you awaiting the finalization of the environmental impact statement?

Mr. FRICK. No, that will not come until the finalization of the impact. The way we do it is with the Cooperative Interagency Steering Committee, where both we and the land management agencies participate in the analysis of any finalized location and at that time, we would issue it.

Senator MELCHER. What procedure did you follow between Townsend and Garrison?

Mr. FRICK. The same procedure was followed there. Although the environmental procedure was different there in that we initially had done a corridor EIS and then we went through a specific centerline assessment. On this project from Garrison west. We're trying to do it as a referenced centerline all in the same process.

Senator MELCHER. You made application to one of the secretaries to the right-of-way from Townsend to Garrison?

Mr. FRICK. That's made to Tom Coston in the regional office and to Mike Penfold in Billings.

Senator MELCHER. And they forward it on to the Secretary of Agriculture and Secretary of Interior.

Mr. FRICK. Yes.

Senator MELCHER. Does your application purport to follow the specific requirements of section 508 of title 43 United States Code 1768?

Mr. FRICK. I'm not familiar with that. You'll have to ask Omar that.

Mr. HALVORSON. Senator, that's an act administered by the land management agencies, the Forest Service and the BLM and in their interaction with BPA in this EIS and in the decision process, we are assuming that they'll take all appropriate steps to apply FLPMA wherever applicable.

Senator MELCHER. Do they, what stipulations were made on that right-of-way from Townsend to Garrison by the Secretary of Interior and the Secretary of Agriculture?

Mr. FRICK. We get involved with some stipulations involving some of our construction practices which are incorporated into our construction specifications. We also, the Forest Service and BLM, the land management agencies set the closure periods when our contractor can work and requirements that they place on him for access to certain areas to protect the unique resources that they're charged with managing. Those also then are included in our construction specifications and become a part of what we lay on our construction contract.

Senator MELCHER. What consideration has been made in the environmental impact statement for the aesthetic and scenic values?

Mr. FRICK. We try to address the initial, you know, the staff's interpretation of the scenic values. This is then taken out for public review. We also discussed this during the early-on scoping meetings trying to get input from the general public as to what is of value to the scenic impact and what do they rate in that. The team does some inter-rating amongst themselves and then it's tried to be covered thoroughly in the environmental impact statement identifying all of the areas of visual or scenic impact with some degree of rating of how severe those are. This information then all becomes part of the primary information that's presented to the decisionmakers before the ultimate decision is made. The documentation of it is done in the EIS document.

Senator MELCHER. Will you explain what you mean by scoping?

Mr. FRICK. The scoping process is a series of early-on announced public meetings, some are held as workshops, some just as open public meetings, are held in various communities along all the alternative routes. We ask for any input from the public. We try to identify the major concerns of the public. We also try to identify any routing alternatives that they might suggest that we look at at that time. There

is also interagency type of scoping that occurs during that process where several other agencies get together and try to lay the ground work for what is going to be analyzed from that point on.

Senator MELCHER. The scoping process from Miller Cooley west, did not even envision avoiding crossing the Clark Fork twice, is that correct? I'll put it the other way. At any point in the scoping process, did you consider staying away from the Clark Fork after crossing the Bitterroot at Miller Cooley?

Mr. FRICK. This was not raised in the scoping process. It was raised later in the EIS review. Our team did look for routes staying south of the Clark Fork all the way to the St. Regis vicinity and those were dismissed largely for engineering, although there was some environmental concerns, too.

Senator MELCHER. What were the——

Mr. FRICK. The steepness of the terrain. The Forest Service had some serious concerns of the access roads that we would require without having any erosion problems, but largely it was the terrain, trying to manage the transmission lines, associated access roads through that terrain.

Senator MELCHER. What area did you look at?

Mr. FRICK. I'm not familiar with that area. We did furnish it for the record if you'd like to have that. I did not participate directly in that myself.

Senator MELCHER. Yes, we'd like to have that and like to understand what's necessary at these public meetings to generate the feeling that indeed we want you to keep away from certain places since that was the general tenor of the public meetings. That's what's supposed to figure in the scoping process. I'm just wondering how much attention was paid at those public meetings at Missoula and Nine Mile and Frenchtown and St. Regis, Superior.

Mr. FRICK. I think the team, as both ours and the Forest Service, has been quite aware of the concern of that, even before these scoping meetings back in, if I recall, since the meetings you held in Deer Lodge, I think, this became quite an issue and I think it did affect some of the decisions that were made on the Townsend-Garrison section.

Senator MELCHER. Well, I'll just say for myself, we have yet, through my staff, had any opportunity to be informed and visually apprised by helicopter what's wrong with keeping south of the Clark Fork and avoiding two crossings.

Mr. FRICK. I thought that information was passed back, but we'll make it available.

Senator MELCHER. The only information we have doesn't amount to anything in that regard. There just is no explanation that has been advanced either for the public or myself on why it's essential to cross the Clark Fork once and then to cross it again. Why not stay away from both crossings?

Mr. FRICK. I'm sorry that that information hasn't been made available. We'll make it available.

Senator MELCHER. Well, we've always heard from the outset, there is something else that has to be done other than what has been done. There is an engineering problem, so we accept that, but what was the second reason you said?

Mr. FRICK. There was some, and it, too, is an engineering problem on the access to that area because of the rugged terrain. It gets to be quite a problem to build an access road system.

Senator MELCHER. Well, both of those are engineering features.

Mr. FRICK. They're both engineering features.

Senator MELCHER. I guess I keep coming back to the scenic and aesthetic requirements that are in section 505. I don't read engineering problems in section 505 of this act. I read minimized damage to scenic and aesthetic values. That comes first, fish and wildlife habitat that otherwise protect the environment. Then it goes on from that, but safety and public health and then air and water quality standards and et cetera. Now, I'm sure that when you say engineering problems, you're taking into consideration some of these points too, so I'm not trying to ignore that, but if the scoping process is to be triggered by the public meetings and the public meetings say, we don't like it, it seems to me that that hasn't exhausted further examination of our routes. I'm incorrect on that?

Mr. FRICK. No; I think if something comes up that we haven't looked at before, we do try and take a look at it, whether some of these are new alternatives or it gets dropped. It depends on whether that was covered before.

Senator MELCHER. Well, let's back up just one point. Was Miller Cooley selected because it was the nearest point across the Bitterroot in the general vicinity? There is something you want to add to that previous answer?

Mr. FRICK. He said part of the analysis that they earlier made on that section was where we could build it because it would be visible from the valley and the highway. Getting through there ended up having quite a high visible impact, so that was weighed quite heavily in the team's work.

Senator MELCHER. At what point was that from the Clark Fork in terms of miles?

Mr. DRIESSEN. It varied anywhere from maybe a couple of miles to fairly close to a freeway.

Senator MELCHER. Well, I'm not interested, I don't think, in a high line a couple of miles from the Clark Fork, and I think that's what you're describing. I think automatically we would want to avoid that, but I assume that there was, it wasn't a high line visible from either the Clark Fork or the highway more than 2 miles from the Clark Fork. Am I wrong?

Mr. FRICK. I think our best thing is to try and present that to you and we'll insert it into the record.

Senator MELCHER. Wouldn't the best thing to do be take note of the scoping process and very diligently pursue examination by, at least by thorough analysis from the air and then follow that up with whatever you call it, the architectural design for esthetics and scenic? I think it would be better if you identify yourself and get your direct statement right on the record.

Mr. FRICK. Senator, I'd like to introduce our reconstruction engineer and also he's been our engineer in the Missoula office here who is better familiar with the history. Lou Driessen is his name.

Senator MELCHER. Mr. Driessen, why don't we accept our testimony? I think that's better.

Mr. DRIESSEN. The routes specifically identified in the meetings particularly in the St. Regis area or the CC Divide, which is a county line, and also the State line and also a route which was just maybe part way between the highway and the State line, someplace in that vicinity

there. We looked at all three of those areas and the CC Divide and also the State line are very high, very rugged and much of those areas are inaccessible and from an engineering standpoint, they would be greatly exposed to the weather, an icing problem, a wind problem. The route that was partly between the highway and the State line was looked at very closely and much of that area is also inaccessible, very steep terrain and because of steep terrain, there would be very few areas where we would be able to move the line away from the highway, so it would be fairly close to the highway and because of that, the visual impact would be very great. Also because of the lack of roads in that area, we'd have to build a lot more access roads and because of the steep terrain, the cuts would be very great and those cuts you can see from a great distance, so every time you look up there, you'd be able to see the transmission line. The alinement that we have right now between the two Clark Fork crossings, very little of that alinement you wouldn't be able to see from the highway.

Senator MELCHER. How about from where you live?

Mr. DRIESSEN. From where I live in Portland?

Senator MELCHER. No, I don't mean where you live. I'm not concerned right now with Portland. Where people live in the area.

Mr. DRIESSEN. The two areas that people would be able to see would be the two Clark Fork crossings, particularly the one at the Alberton crossings. There is several residences in there that would be able to see it from a distance and also depending on which option that we choose in the St. Regis area. If the lower option or the southern option is chosen, the people in the St. Regis areas wouldn't be able to see that. If the tamarack or the northern option is chosen, then the people in St. Regis would probably not be able to see that line. But some individuals , I believe there is one or two residences along that line that would be able to see parts of that line.

Senator MELCHER. Isn't there a road from Idaho into that general area that is already in existence?

Mr. DRIESSEN. Along the lower, the southern option, yes. The old highway.

Senator MELCHER. An old highway.

Mr. DRIESSEN. Yes.

Senator MELCHER. Has it ever been looked at?

Mr. DRIESSEN. The southern option follows part of that highway.

Senator MELCHER. You and I are talking about two different things. Isn't there a road through here?

Mr. DRIESSEN. There is a road from Thompson Falls that goes over.

Senator MELCHER. Isn't there a road through here into Idaho?

Mr. DRIESSEN. That I'm not aware of; no.

Senator MELCHER. I don't know if it's used very much. I don't think it's used very much by the traveling public, but I think there is a road there. I just wondered whether construction was easier when you get into Idaho.

Mr. SANSOM. There are several roads into Idaho there, Senator.

Senator MELCHER. There are other possibilities, apparently they haven't been looked at. Now, we want to be advised about, Mr. Frick, what the dangers are with forest fires to the transmission line or the safety—let me rephrase that. We want to be advised of what the safety precautions must be in case of fire under the transmission line or near the transmission line.

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Mr. FRICK. The only safety hazard from the transmission line during a fire is if you get intense smoke that could cause a flashover of the transmission line. The hazard on this particular line, I would think, is not very great because the flashover would generally occur between conductors up from the air of heavy smoke. It would not be from the conductors to the ground because the average height is high above the ground, 35 up to 60 feet. On some of the other lower voltage lines, particularly the 230, this does get to be a concern because lower distance and there is a possibility during intense fire. Most of this wouldn't occur on a forest fire because the right-of-way is cleared of major debris piles or anything. One place where it concerns us greatly is in agricultural land. If haystacks or something were located directly under the line, we try to encourage farmers to not put haystacks there because if they did catch on fire, they would create intense smoke. We would not anticipate a hazard from the flashover of the line causing the fire.

Senator MELCHER. What is the right-of-way that's cleared?

Mr. FRICK. Approximately 125 feet. We try to vary that. When we approach the towers and the conductor goes up here, we try to get it in and get away from the straight line for visual effect. It is cleared for the most part of 125 feet.

Senator MELCHER. Is the right-of-way kept clear by the use of herbicides?

Mr. FRICK. I would anticipate very little, if any, use of herbicides on this. We might do some stump treatment with herbicides. I think if you'd like more information on that, Mr. Wilkerson supervises the operation of maintenance of clearing, if you wish to know more.

Senator MELCHER. Mr. Johnson, has the demand dropped or service that they calculated this summer?

Mr. JOHNSON. These were in actual loads served by the agencies as opposed to what was estimated?

Senator MELCHER. Yes.

Mr. JOHNSON. Yes, they have.

Senator MELCHER. What's happened?

Mr. JOHNSON. They're down.

Senator MELCHER. How much in this area?

Mr. JOHNSON. In the rough range of 10 percent. According to this area, the rough Montana area, I can't say specifically to Montana. With this entire system, perhaps approaching 10 percent.

Senator MELCHER. Could we have the demand route in Montana? Could that be supplied for the record?

Mr. JOHNSON. Yes, we will do that.

Senator MELCHER. I want to go back to Miller Cooley again. Why was Miller Cooley selected? Was it because relatively few people live there going south, or was it selected because there is a narrowing of the Bitterroot there, or, what?

Mr. FRICK. You mean on the southern alternative there?

Senator MELCHER. Yes.

Mr. FRICK. The southern alternative is an alternative to the original decision which called for building the line parallel down the Clark Fork Valley from Garrison substation, and as a result of some public input, we expanded the analysis that was underway from the Missoula area to Bell to go back and look at alternatives at the request of several

landowners in the Clark Fork Valley to look at alternatives both north along the Clark Fork Valley, the powerline, that's the northern alternative you see there. The southern, we also had a request to try and develop routes south of the Clark Fork Valley past Missoula and that is the south route from the valley are still receiving full consideration. We have not made, even approached making a decision on any of the routes. The environmental impact statement did identify what environmental people rated as the lowest environmental impact overall and that was the southern route. It is quite a bit more expensive, but it was developed as an alternative to utilizing the existing right-of-way that we have from Garrison to past Missoula and the Rattlesnake area, which was in the 1979 Federal record of decision that adopted that parallel right-of-way.

Senator MELCHER. So going up to Plains and either route, one crosses the Indian reservation and one does not; is that correct?

Mr. FRICK. Yes, that's right. Plains alternative was developed many years ago as an alternative to the same west of the Indian reservation.

Senator MELCHER. And the yellow line between the green and red lines, which is——

Mr. FRICK. That is the route that stays west of the Indian reservation.

Senator MELCHER. The green line avoids the Rattlesnake one way or the other. One brings it down the corridor south of the Rattlesnake and one goes north of the Rattlesnake.

Mr. FRICK. Well, no. Both of those would pass through the Rattlesnake area north of Missoula.

Senator MELCHER. Both of them would?

Mr. FRICK. Yes.

Senator MELCHER. I'm speaking of the Rattlesnake Wilderness and Recreation Area.

Mr. FRICK. Yes. The one little loop you see there directly north of Missoula is a route that was indentified to miss the residential area and go partially into the wilderness area. It's from a half mile to a mile or so. It might even get up to 2 miles through that recreational area. It's a recreational area here north of Missoula, and so we developed an alternative to be analyzed both following the existing corridor down through the residential areas of the Rattlesnake and an alternative that missed that residential area of Rattlesnake that would be through the recreational area. That's still under analysis. There again, that was developed to try to suggest to find a route that missed and avoided residences to the maximum extent possible. But it does, in this case, encroach, and many Missoulians feel is a very valuable asset to recreation.

Senator MELCHER. Thank you, very much, Mr. Frick, Mr. Driessen, Mr. Johnson. Do you have some testimony for us?

Mr. HALVORSEN. No, I do not, Senator. I was here in case questions might arise that I would be able to help Mr. Johnson answer or help to assist you.

Senator MELCHER. Well, I'm informed that we will be around yet, so if you have some questions, perhaps we'll be able to address them to all three of you. Thank you very much. Thank you, Mr. Johnson.

[Subsequent to the hearing, Mr. Johnson submitted the following:]

Department of Energy
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

OFFICE OF THE ADMINISTRATOR

NOV 24 1982

In reply refer to: CE/BPA-O

Honorable John Melcher
United States Senate
Washington, D.C. 20510

Dear Senator Melcher:

On August 26, 1982, you chaired a field hearing of the Senate Committee on Energy and Natural Resources in Missoula, Montana. At that hearing, representatives of Bonneville Power Administration (BPA) were pleased to provide testimony on BPA's involvement in the Colstrip Transmission Project and related activities.

In reviewing the hearing transcript, we have identified a number of inquiries and requests for information to be supplied for the record. We are including in this letter and its Enclosures the information which was requested.

We should first note that there is an apparent ambiguity on Page 8 of the hearing transcript, which deals with the contracts awarded by BPA for construction of the Townsend-Garrison segment of the Colstrip Transmission Project. In the first paragraph on this page there is reference to "three separate contracts," while in the second paragraph a statement is made that "We are now in the process of awarding a fourth contract for the third and the final segment of the transmission lines from Townsend to Garrison." We wish to clarify that the four contracts referred to are the three contracts for portions of the transmission line construction plus a contract for the construction of Garrison Substation.

Pages 50-53 of the transcript deal with analyses made by BPA and the Forest Service with respect to alternative transmission routes in the general vicinity of the Clark Fork River. The information requested on this matter is included in Enclosure 1. Regarding your statement on Page 53, lines 10-16 of the transcript, we understand that you were not interested in considering any route within close proximity of the Clark Fork River.

On Page 182 of the transcript, you requested "accurate figures" as to the hiring activities of BPA construction contractors, specifically with regard to the number of workers hired in Montana in comparison to the total hiring. Enclosure 2 provides a breakdown of the hiring figures as of October 25, 1982.

We appreciated the opportunity to testify at the August field hearing, and trust that the information provided at the hearing and in this letter is fully responsive to your concerns. Should you or your constituents desire additional information, please let us know.

Sincerely,

Peter T. Johnson

Administrator

Enclosures

Enclosure 1
(Senator Melcher's Hearing)

A route from the Missoula area that would stay south and west of the Clark Fork River without crossing the river was found undesirable. This route would cross terrain barriers with very steep slopes, rock outcrop areas, areas of high relief, and places of shallow soil underlaid with hard massive rock. The road system would be extensive and almost entirely outside the transmission line right-of-way. Very few existing roads are available that could provide access to individual towers. There would be excessive disturbance due to slope. Heavier, more costly structures would be needed due to increased spans. This route could also cross areas with high mass movement susceptibility, needing special designs and mitigative measures, thereby increasing cost. Reliability of the transmission line and its roads is also reduced. A considerable portion of this route would cross areas with elevations over 6,000 feet, thereby increasing erosion potential and visual scarring due to slow vegetative recovery. Icing and snow loadings require heavier towers, reduce spans, and increase roads causing visual incompatibility.

Reliability decreases as accessibility becomes a problem due to deep snows and greater distance away from roads that are kept clear of snow. This route would also cross roadless areas whose management goals are to provide dispensed recreation in a near natural setting, and provide for old growth dependent wildlife species. This route would cross seven major drainages in 25 miles, all of which have high recreation use especially Fish and Petty Creeks. There is also private land in these two drainages. This route could also impact undeveloped, subdivided land. There are also numerous high mountain lakes up against the state line that have high recreation and scenic value.

Enclosure 2
(Senator Melcher's Hearing)

Survey of Montana Hired Employees as of October 25, 1982

JOB NAME	CONTRACTOR	TOTAL EMPLOYEES	MONTANA HIRED	PERCENT
Townsend-Garrison Schedule I	IRBY Construction Co.	305	187	61
Townsend-Garrison Schedule I	J.T.S. Enterprises	24	16	66
Townsend-Garrison Schedule II	Power Two	160	140	87
Townsend-Garrison Schedule II	Pacific States Clearing	26	15	58
Townsend-Garrison Schedule III	JOB Construction Co.	72	24	33
	TOTAL PROJECT WIDE	587	382	65

Senator MELCHER. We'd like to hear now from the Forest Service. Mr. Orville Daniels, supervisor of the Lolo National Forest who is representing Tom Coston, regional forester. I want to announce before we hear from Mr. Daniels that there is a list somewhere back by that door that if any of you would like to sign up, you will receive a copy of this printed hearing record. It usually takes about 60 days and the hearing record is printed and you can receive a copy from Congress if you so choose by leaving your name and address back there and eventually you'll get it. Orville, please proceed.

STATEMENT OF ORVILLE L. DANIELS, SUPERVISOR, LOLO NATIONAL FOREST, REPRESENTING TOM COSTON, FORESTER, REGION I, FOREST SERVICE, DEPARTMENT OF AGRICULTURE

Mr. DANIELS. Thank you, Senator Melcher. For the record. I'm Orville Daniels representing Regional Forest Service and Tom Coston. I appreciate the opportunity to describe the Forest Service's role and responsibilities in the Federal Colstrip Environmental Impact Statement preparation process.

The Forest Service became an active participant in the Federal EIS effort when Bonneville Power Administration was appointed to lead the Federal agency in November of 1976 and it became apparent that the transmission line alternatives leading west from Colstrip, Mont. would cross national forest lands.

The Forest Service has the responsibility for approving the location, construction methods and maintenance of electrical transmission rights-of-way across national forest system lands. In evaluating a transmission line proposal, the agencies consider the effects of the proposal on all lands regardless of ownership. However, our responsibility in the Forest Service is limited to the national forest system land. Legal mandates, such as the National Environmental Policy Act, National Forest Management Act and Federal Land Policy and Management Act guide to the process of locating and constructing transmission lines. This includes provisions for cooperation and consideration between the participating agencies.

In September of 1979, the Forest Service and BLM approved a transmission corridor crossing Federal lands between Colstrip and Hot Springs, Mont. The original EIS was supplemented in 1981 because of new electrical planning considerations and landowner concerns. A revised corridor was approved on Federal lands between Townsend and Garrison, Mont.

In continuation of the project westward, the Forest Service has cooperated with the BLM, BPA, and other agencies including the State of Montana in evaluating transmission corridor alternatives between Garrison, Mont., and Spokane, Wash. These alternatives cross the Deer Lodge National Forest and Lolo National Forest in Montana and the Idaho Panhandle National Forest in Idaho. A location decision is anticipated in 1983.

Forest Service participation and evaluation has been through representation on both Interagency Environmental Impact Statement's Steering Committee and the Interdisciplinary Team conducting the studies. In my role as lead Forest Service supervisor, I represent the regional forester in providing overall coordination and direction.

As guidance to future rights-of-way planning, the Forest Service, BLM, and State of Montana, recently concluded a 2-year utility transportation corridor study for Montana. It resulted in an assessment of the present corridor situation, an agreement on cooperation between land managing agencies for dealing with future projects and criteria for identifying corridor options during land management planning processes now underway by the agencies.

This concludes my prepared testimony. I'm here to answer any questions and I have with me Jack Fisher who is the energy coordinator for the Lolo National Forest.

Senator MELCHER. Thank you, Orville. The reason you testified for Tom Coston is because he had a previous engagement today; is that not correct?

Mr. GRAY. That's correct.

Senator MELCHER. How many miles of national forest lands are impacted by each of these alternatives?

Mr. DANIELS. Well, the Hot Springs alternative, which has a couple of variations in it, there is about, there is 5 miles of BLM land involved and with the Rattlesnake and Lincoln Wood areas we're talking about roughly 75 miles of Forest Service lands, an average between those 2 and 5 miles for the BLM. On the other one, the one that goes through Plains, again, considering that there is a difference in the Rattlesnake, one of those is 115 miles and the other is 118 with the same 5 miles to the BLM and when we get to the south route, the Taft route, then it jumps quite a little bit. There is 161 miles of national forest system lands involved and only roughly 2 miles of BLM.

Senator MELCHER. Is there much private land or is there very little private land involved in that southern route?

Mr. DANIELS. There is a lot less. On the south route, 63 percent of the route is on Federal land, so the remainder would be on private, State, and private, excuse me, and on the others, there is about 50 percent Federal on the Hot Springs loop and about 45 percent on the Plains, the remainder being private or State. The purportion changes appreciably.

Senator MELCHER. Is the Forest Service with the public in these public meetings?

Mr. DANIELS. Only as a participant with the BPA. BPA conducts the meetings, but we have helped in putting together the overall plan for having meetings. We've helped lay out some of the workshops. We have attended all of the meetings in order to answer questions and we've been keeping informed on what they've been doing through your participation in the Steering Committee and in the Interagency Team.

Senator MELCHER. I think a couple of these questions are very significant in view of my last two or three questions. Who has been taking the lead in the Interagency Team?

Mr. DANIELS. On the Interagency Team itself, Jack Fisher has been taking the lead.

Senator MELCHER. Representing the Forest Service?

Mr. DANIELS. Yes.

Senator MELCHER. Has the Forest Service looked outside the study area for possible routing?

Mr. DANIELS. Yes, we've looked at a number of them that never made a full alternative review. We've looked south of the Clark Fork

River along the various routes that you've mentioned just a few minutes ago. We've looked at the McGruder Corridor to research it and also the Joco Pass routing was reviewed.

Senator MELCHER. Orville, it would be helpful for me, and I think for everybody, if you go right to the map and point those out. There is a pointer there.

Mr. DANIELS. OK, we've reviewed the possibility of something going through Jocko Pass. There is a line going through there now that's been looked at by Montana Power. We have looked at the possibility of going south of the Clark Fork in a variety of locations here through this country and then we have looked at the McGruder Corridor, by request we have looked at it, and it's south of our map and it doesn't show on this map.

Senator MELCHER. That narrow point there, the Bitterroot, if you go about 30 miles south of there, in that narrow point there where the Forest Service is, you're already into the wilderness area, are you not?

Mr. DANIELS. Well, if you were to cross there and go west, you would be, yes, sir.

Senator MELCHER. Can you point out for me that road that I believe exists from Idaho into that general vicinity?

Mr. DANIELS. There are a number of roads in the area. There are two major ones that go from Idaho into Montana and one of them is across the Hudu Pass right in this general vicinity and the other one is the Litle Joe Road which is up in this general vicinity and they do go into Idaho. There is also segments of what we call the State line road which is an old twisting road built by the CCC's that go along the State line here along the Bitterroot Divide and there are a number of side roads in that area.

Senator MELCHER. Have you ever looked at those as alternative routes to get this line into Idaho where it's much easier construction?

Mr. DANIELS. As far as going into Idaho from here, I don't believe that's ever been looked at, Senator.

Senator MELCHER. I thought not. Why don't it be looked at? Because Bonneville never asked for it to be looked at?

Mr. DANIELS. The assumption that it would be easier to build in Idaho. I'm not sure that that's the case. There is some very rugged terrain.

Senator MELCHER. I'm testifying it's fact.

Mr. DANIELS. Well, then, we'll look at that. Much of this country is very rough topography.

Senator MELCHER. No, but where the roads are. What are those roads?

Mr. DANIELS. The roads that go across would not give us much except access to the higher country. The road that parallels, goes along the divide and that's relatively flat in there, but it is high.

Senator MELCHER. You'd have a skyline problem.

Mr. DANIELS. Yes, you would.

Senator MELCHER. Now, I'm more interested, after you get into, what's the elevation after you get into—let's go 40 miles from that divide into Idaho. Doesn't the elevation drop off substantially?

Mr. DANIELS. When you're going to the west, it does, but the elevation in this part is very high.

Senator MELCHER. I understand that it's very high, but when you cross one of those roads going east, generally east-west, doesn't any elevation drop rather dramatically?

Mr. DANIELS. After you get past Coeur D'alene Lake and down into this area, yes, it does get flat.

Senator MELCHER. Would you point out those two roads there that come in there? Not the CCC road, but the roads coming into Idaho into Montana and that area?

Mr. DANIELS. OK, this one, the Little Joe Road takes off right about in here, comes down into this drainage and then follows roads this way. The other one comes down farther to the east in this general area, and then comes out down here toward, it goes down to Clearwater in this manner and comes out this way. I can't see them very well. This map does not have them.

Senator MELCHER. In the Maxville area in the routing options, did the Forest Service participate, if it had been the function, and if so?

Mr. DANIELS. Yes, we have. We've prepared an independent environmental analysis of the impact along that area and including some suggestions that were made by the Granite County Alliance, so we've done some independent work as well as cooperating with the Bonneville Power in looking at alternate routes there.

Senator MELCHER. And that will be one of the considerations then in the final environmental impact statement.

Mr. DANIELS. Yes.

Senator MELCHER How about Blue Mountain, the same question.

Mr. DANIELS. We've been helping with the alternatives there. We didn't make an independent review, but we've been working on the teams.

Senator MELCHER. In St. Regis?

Mr. DANIELS. The same thing.

Senator MELCHER. Who is responsible for the final route location decision?

Mr. DANIELS. That would be Tom Coston, the regional forester.

Senator MELCHER. That's a key question.

Mr. DANIELS. That will be for the lands on the national forest system and BLM for director, State director will have responsibility for the crossing of BLM land.

Senator MELCHER. Since most of the involvement for a right-of-way is on national forest lands; is that accurate?

Mr. DANIELS. Yes, it is.

Senator MELCHER. Or are some of those routes more——

Mr. DANIELS. No, the south route, 63 percent is on Federal land and on the others, the Hot Springs one has a lot. It's about a third on Federal lands and almost a half on the plains one, so we're talking about anywhere from a third to a half to 65 percent Federal on all of those routes.

Senator MELCHER. The decision that Tom Coston makes is based not only on the environmental impact statement, but is based on the requirements of the FLPMA, is it not?

Mr. DANIELS. Yes, it is.

Senator MELCHER. Does the Department of Agriculture have regulations drawn for section 505 to implement section 505 of FLPMA?

Mr. DANIELS. I don't know that answer. Jack, do you know?

Mr. FISHER. No, I don't. Not specifically to section 5.

Senator MELCHER. Section 505.

Mr. FISHER. Or 505, excuse me.

Senator MELCHER. Well, that's fine. Because I think it's rather straightforward language and I had a lot to do with it being straightforward, but I think it says what I wanted it to say and I think it's good guidance. I don't think it needs regulations. I like to feel that you can understand the law just as clearly as I can. You're saying that Tom Coston isn't going to make his decision until next year?

Mr. DANIELS. It will probably be shortly after the first of the year that a decision would be made.

Senator MELCHER. But you're open to other rights.

Mr. DANIELS. Yes.

Senator MELCHER. If as a result of this public hearing, in all fairness to the testimony that's received, if the balance of testimony is of the nature that indicates other routes should be looked at, what will be the Forest Service's reaction?

Mr. DANIELS. We would join with the Bonneville Power Administration in looking at those.

Senator MELCHER. Would you take the lead?

Mr. DANIELS. At present we can't. There has been a designation of the Bonneville Power Administration as lead in this and we are working with them. Unless there was a change in the designation, we wouldn't assume it unilaterally.

Senator MELCHER. Would you take the lead in looking at alternatives on the basis of better satisfying the requirements of FLPMA in guiding the decision of Tom Coston?

Mr. DANIELS. In that regard, we are taking a lead now. As it crosses the national forest lands and the criteria that you read from FLPMA, it is almost identical to that that we've been trying to follow in this location as part of my particular forest plan and part of our policy as well as the act. Those are all good criteria.

Senator MELCHER. Well, I think the point is, though, do you feel constrained, does the Forest Service feel constrained to get an agreement from Bonneville Power to look at alterative routes?

Mr. DANIELS. I've never hit that constraint. I felt that they were willing to look if we had something to look at.

Senator MELCHER. Which means, I think, that you would view independently some alternative routes and if you felt there was some better routes, you would suggest that the Bonneville; is that correct?

Mr. DANIELS. Yes, yes. Even though they have been lead, we have taken an independent action in major parts of the national forest at this point and we would continue to do that.

Senator MELCHER. In order for Tom Coston to make a judgment that he feels is correct, that is almost essential for that to be done; is it not?

Mr. DANIELS. That's right.

Senator MELCHER. Well, we'll wait until the end of all the testimony, but we may be requesting some more routes to be looked at. I have been somewhat concerned myself that I find that I'm not knowledgeable at all and my staff, I find isn't very knowledgeable of any possibility of a route south, but I don't mean a mile or two from the Clark Fork, I mean more than that south of what has been looked at and it concerns me that perhaps we haven't looked at the best alternative yet.

Thanks very much, Orville. Your testimony and your answers are very helpful. Mr. Leo Berry, director of State of Montana, department of natural resources, representing Gov. Ted Schwinden.

STATEMENT OF LEO BERRY, DIRECTOR, STATE OF MONTANA DEPARTMENT OF NATURAL RESOURCES, REPRESENTING HON. TED SCHWINDEN, GOVERNOR, STATE OF MONTANA

Mr. BERRY. Thank you, Senator. I've asked Mr. Robinson and the administrator of the energy division within the department to join me at the table here so that he can answer all the tough questions. Governor Schwinden asked me to thank the chairman and yourself for the invitation to present testimony at the hearing today and regrets the fact of the scheduling conflicts that made it impossible for him to attend himself.

It's my understanding that your main interest in this hearing is the siting process used by Bonneville and the State's role in that as far as our testimony goes and I will combine my written testimony to that, but will be glad to answer any questions that you might have regarding the State's involvement in both the Bonneville procedures and the particular siting of this individual route. A little history may be in order regarding that matter.

Shortly after assuming my present position as the director of the department of natural resources in July 1981, I became involved in negotiations with Bonneville Power Administration regarding the siting of its share of the Colstrip 3 and 4 transmission facilities. As you're probably aware, the State of Montana until 1977 went in and approved construction of Colstrip 3 and 4, approved a route which is significantly different than the route being proposed by the Bonneville Power Administration. As Mr. Daniels pointed out, the route through the Jocko area that to cross the Flathead Indian Reservation was the route that the State originally approved upon request of the consortium of the applicants in that particular project. During that time, I'm speaking of earlier in 1981, Bonneville took the position that the State had no substantive decisionmaking authority over the line. Considering that position in the lack of progress and negotiations concerning the line, the Governor or the Attorney General Greeley decided in February 1981 to file suit seeking determination that the State does have a substantive role to play in the siting of that line. A recent Federal district court decision has ruled that Montana not have substantive standards as outlined in FLPMA, the section that you cerning the line, the Governor or the Attorney General Greeley decided in February 1981 to file suit seeking determination that the referred to, and if I read that ruling correctly, that the State cannot site the line other than where and how the Federal agency decides. Pragmatically, this means that the people of the State do not have any assurance that their views will be incorporated into the Federal transmission line siting decisions, other than the influence that yourself and Congress might have.

In other words, BPA could ignore the position of the State in determining where or how the lines should be built. That is not to say that progress is not being made between Bonneville and the State on the issue of transmission lines cited. Recently we have negotiated a memorandum of understanding which Mr. Johnson referred to, which I believe the State can sign. It provides for joint studies, review, evaluate and current decision on future projects. A copy of that memorandum is attached for your information and convenience. If the State signs it, we will have taken a first step toward the partner-

ship we have sought in making decisions on Federal transmission projects. This step buries hope, but it is critical to understand that the memorandum is silent on what happens if the State and Bonneville disagree on the ultimate siting decision.

Although the joint environmental impact statement will discuss the agency's differences, Bonneville does not agree to incorporate the State's decision on the line into its decision and perhaps it cannot, which should be a matter of concern to this committee. If BPA does not have the authority to allow the substantive State involvement or will not exercise it, then perhaps the enabling legislation ought to be amended to allow or perhaps require it to form a partnership with the people of the State of Montana in the siting of the transmission lines. The State recognizes the authorities of Congress to make the need determination for the line and we understand that we are likely preeliminated from reviewing that particular aspect of the line. However, we would like to insure that our evaluation under the Montana Major Facility Siting Act is incorporated into the implementation into the decision on how and where the line is sited.

As to the Colstrip line, particular line you're concerned with, the State has approved all but 3 miles of the Townsend to Garrison portion of the line and we are negotiating on that part as Mr. Frick mentioned. As to the Garrison west portion of the line, we are currently evaluating that project pursuant to the attached contract with BPA, the contract both Mr. Johnson and Mr. Frick mentioned involving $370,000. Our timetable calls for completion of the State's review by January and hopefully, concurrent in the decision of April 1983. The major problems from the State standpoint concerning the present situation is that a significant part of the work was completed by BPA prior to substantive State involvement and that the people have no assurance that the State's position will be adhered to. Hopefully such occurrences can be avoided in the future through the joint process established in the memorandum of understanding. There is also another memorandum of understanding, an umbrella-type memorandum, which Mr. Johnson referred to and we are negotiating now and I suspect will sign in the near future. However, to assure adequate influence by the people of Montana or any State overrule of the siting of the Federal transmission line, the partnership concept should be incorporated into the Federal law.

That concludes my statement, Senator, and I would be glad to try to answer any questions that you or the others might have.

[The attachment to Mr. Berry's statement follows:]

AGREEMENT

Between

STATE OF MONTANA

and

BONNEVILLE POWER ADMINISTRATION

UNITED STATES DEPARTMENT OF ENERGY

This agreement executed as of _____, 1982, by the United States of America, Department of Energy, Bonneville Power Administration (BPA) acting through the Assistant Administrator for Engineering and Construction, and the State of Montana, acting by and through the Director of the Department of Natural Resources and Conservation (DNRC),

WITNESSETH:

WHEREAS, the State of Montana, acting by and through the Governor, and the Bonneville Power Administration, acting by and through the Administrator, have executed a Memorandum of Understanding on August _____, 1982, expressing the desire to cooperate in the siting of facilities that transmit electric energy, and related activities, and

WHEREAS, this agreement reflects the parties efforts to implement that cooperative objective, and

WHEREAS, DNRC and BPA each have an interest in and a responsibility for insuring that the location, construction, and operation of needed energy conversion projects will provide minimal adverse effects on the environment and upon the citizens of Montana, and said responsibility is defined in part by law,

WHEREAS, pursuant to acts of Congress, BPA is authorized to plan, design, construct, operate, and maintain certain projects for the transmission of power, to develop and implement plans and programs, and to purchase the electrical power from energy projects built by others to meet the electric power needs of the Pacific Northwest including that part of the State of Montana generally west of the Continental Divide,

NOW, THEREFORE, the parties hereto agree as follows:

1. To fully cooperate by jointly studying and evaluating alternative locations for transmission lines hereafter proposed to be constructed and owned by BPA within the State of Montana. Such cooperation encompasses the joint undertaking of activities to achieve compliance with applicable statutes including, but not limited to the National Environmental Policy Act (NEPA), the Pacific Northwest Electric Power Planning and Conservation Act, the Federal Land Policy Management Act (FLPMA); and the Montana Environmental Policy Act (MEPA) and the Montana Major Facility Siting Act (MFSA). The specific activities which the parties agree to perform jointly, the manner of

execution, including level of detail, methodology, management and staff interaction, dollar value, and such other items as the parties deem necessary and appropriate shall be negotiated and clearly set forth in work plans and/or subsequent agreements covering individual energy projects. A model plan is attached as Exhibit A, but it is recognized that the process may be modified for a specific project. The activities which the parties hereby agree to undertake jointly may include, but are not limited to, preparation of environmental assessments (EA's) and environmental impact statements (EIS's); oversight advice on the evaluation of baseline conditions of the natural, social, and economic environment; evaluation of potential impacts of individual projects and alternatives, alternatives for mitigation of impacts, alternative route and location studies, alternative technologies, centerline studies, design and engineering, participation with public involvement efforts, monitoring impacts of project construction and operation, and all other activities that are required for Montana to determine compliance with the substantive standards of MFSA.

2. BPA and DNRC will, where appropriate, act as joint lead agencies and secure the cooperation and involvement of other Federal, State, and local government agencies and Indian Tribes with permit authority or jurisdiction over any aspect of the energy project or having special expertise with respect thereto. In order to accommodate and unify the information needs, EIS, and hearing requirements of all such agencies with permit authority or jurisdiction over any aspect of the project, or having special expertise with respect thereto, BPA and DNRC will consider the requirements and informational

needs of such cooperating entities in developing scopes of work, schedules, and funding.

3. For energy projects covered by this Agreement, BPA agrees to compensate DNRC for necessary and reasonable expenses and administrative costs incurred by DNRC for its participation in the specific activities as set forth in Section 1.

4. The parties will meet at the call of either party at mutually agreeable times and places to encourage the exchange of information and solicitation of recommendations. The purpose of the meetings will be to: 1) solicit DNRC's involvement in BPA's long-range plans, policies, and rules for the location, construction, and operation of transmission line projects within the State of Montana and for the purchase of electrical power within the State of Montana; and 2) to discuss the joint planning, evaluating, and monitoring of specific BPA energy projects proposed to be constructed and operated within the State of Montana, as per Section 1.

In order to facilitate timely cooperation, BPA will notify DNRC of new proposed energy projects as soon as it is reasonably anticipated that it will be located in, or impact on, the State of Montana before BPA applies for Congressional authorization for funding of these energy projects.

5. If the provisions for joint study set forth in Section 1 and the cooperation sought by this Agreement do not achieve mutually acceptable conclusions, independent sections of the joint report will be presented by the

parties to the Board of Natural Resources and Conservation (BNRC) and the appropriate Federal decisionmakers. In such cases, all appropriate data information, whether collected jointly or independently by any party, shall be available to all involved parties.

6. The BNRC, after receiving recommendations, permits, decisions, opinions, etc., from State and local agencies, with permit authority or jurisdiction over any aspect of this project shall determine compliance with the substantive standards of MFSA. BNRC shall attempt to carry out its legal mandate in conjunction with Federal agencies with authority or jurisdiction over any aspect of this project and will, if possible, issue concurring decisions.

7. The general contract provisions contained in Exhibit B, which is attached hereto and incorporated by reference as a part of this Agreement.

8. This agreement may te modified or amended by written mutual agreement between BPA and DNRC, and terminated by mutual agreement or after 30 days' written notice by either party.

9. This agreement is effective upon execution by both parties and upon execution of the Memorandum of Understanding between the Governor of the State of Montana and the Administrator of the Bonneville Power Administration.

10. Nothing in this Agreement shall be construed to limit, repeal, or in any manner modify the existing legal rights, privileges, and duties of the

parties hereto as provided by contract, agreement, statute, or any other law or applicable court decision.

UNITED STATES OF AMERICA
Department of Energy
Bonneville Power Administration

By: Marvin Klinger
Assistant Administrator for Engineering and Construction

8/20/82
Date

STATE OF MONTANA
Department of Natural Resources and Conservation

By: _____
Director

_____
Date

(WP-EV-0322v)

EXHIBIT A

MODEL PLAN

Federal/State Involvement Process

The following Federal/State involvement process describes, generally, the level of involvement and steps necessary to site BPA transmission lines in BPA's service area in Montana. Because the involvement process is a model, it is recognized that it may be necessary to modify the process on a specific project basis which will be reflected in the work plan

BPA and DNRC co-lead agencies

↓

Work Plan/Subsequent Agreements

↓

Federal/State DRAFT Environmental Impact Statement

↓

Department of Health and Environmental Sciences

↓

Joint BPA/DNRC Hearings

↓

Federal/State Final Environmental Impact Statement

↓

Joint BPA/DNRC Presentation to BNRC

↓

BNRC Actions (Compliance with Montana Major Facility Siting Act's Substantive Standards and Recommendations)

↓

Federal Record of Decision(s)

↓

BPA Decisions

(WP-AE-1735K)

EXHIBIT B

GENERAL PROVISIONS - INTERGOVERNMENTAL AGREEMENTS

1. OFFICIALS NOT TO BENEFIT (FPR 1-7.102-17)

No member of or delegate of Congress, or resident Commissioner, shall be admitted to any share or part of this agreement, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this agreement if made with a corporation for its general benefit.

2. COVENANT AGAINST CONTINGENT FEES (FPR 1-1.503)

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this agreement upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this agreement without liability or in its discretion to deduct from the price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

3. CONVICT LABOR (FPR 1-12.204)

In connection with the performance of work under this agreement, the Contractor agrees not to employ any person undergoing sentence of imprisonment except as provided by Public Law 89-176, September 10, 1965, (18 U.S.C. 4082(c)(2)) and Executive Order 11755, December 29, 1973.

4. EQUAL OPPORTUNITY

The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to insure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action will include, but not be limited to, the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

The Contractor will comply with all provisions of Executive Order No. 11246 of September 24, 1965, as amended by Executive Order No. 11357 of October 13, 1967, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(WP-AE-1736K)

AGREEMENT
BETWEEN
MONTANA DEPARTMENT OF HEALTH & ENVIRONMENTAL SCIENCES
MONTANA DEPARTMENT OF NATURAL RESOURCES & CONSERVATION
AND
BONNEVILLE POWER ADMINISTRATION
UNITED STATES DEPARTMENT OF ENERGY

This Agreement, executed as of 17 Nov, 1982, by the United States of America, Department of Energy, acting by and through the Administrator, Bonneville Power Administration (BPA), the Department of Natural Resources and Conservation of the State of Montana, and the Department of Health and Environmental Sciences of the State of Montana (State Agencies),

W I T N E S S E T H:

WHEREAS, Judge James F. Battin of the United States District Court for the District of Montana, entered an Order on March 4, 1982, in the case of State of Montana, et al. v. Peter Johnson, et al., and

WHEREAS, said Order reads in part as follows:

"IT IS FURTHER ORDERED that the Bonneville Power Administration must comply with the substantive requirements of the Montana Major Facility Siting Act."

NOW, THEREFORE, the parties hereto agree as follows:

BPA will respond to the Order of Judge Battin and will furnish all information requested by the State Agencies.

The State Agencies have advised BPA that it will determine whether the substantive requirements of Montana's Major Facility Siting Act have been complied with for the segment of the transmission line from Garrison to Montana's western border.

The parties agree that time is of the essence to this Agreement and, because of the time constraints, both parties are making accommodations in their respective schedules. In addition, the State Agencies, unaided, cannot accomplish their determinations consistent with BPA's construction schedule. Delays in the initiation of construction contracts may adversely affect BPA's construction schedule for the Garrison-Spokane segment of the transmission line and the parties hereto wish for that construction to go forward in a timely fashion. In response to the demands imposed upon the State Agencies, BPA will provide necessary financial aid to expedite the State action.

The State Agencies, in making their determinations, will consider whatever factors they consider relevant. The State Agencies intend to consider requirements listed in Montana Codes Annotated Sections 75-20-301 and 75-20-503, and the substantive requirements of Title 75, Chapters 2, 5, and 10, MCA and rules adopted thereunder. The State Agencies will make every effort to confer with BPA and its technical staff to discuss with BPA the corridors, mitigation plan, and other relevant matters.

BPA agrees to reimburse the State Agencies for the actual costs for analyzing the material and making said determination. These costs shall include reasonable staff salaries, administrative costs, travel, printing, photocopying, and Board expenses. The State Agencies shall make all efforts to make such determinations by or within 8-1/2 months from the date of execution.

BPA shall make an initial payment of $25,000 when this Agreement is signed. After the State Agencies review the information, a more detailed

work statement budget, payment schedule, and cost-accounting method(s) shall be agreed upon within three (3) weeks following execution of this Agreement with further payment to be made upon receipt of bimonthly progress reports. In any event, however, such costs are not expected to exceed $370,000, $300,000 of which will be allocated to the Department of Natural Resources and Conservation and $70,000 of which will be allocated to the Department of Health and Environmental Sciences.

The parties hereto have been advised of Montana Power Company's position that the inability to timely integrate the output of Colstrip Unit 4 into interconnecting transmission lines between Garrison and Spokane will worsen expected power deficiencie and substantially increase costs for the State of Montana and the Pacific Northwest, all as set forth in a letter from Montana Power Company dated March 10, 1982, marked as Attachment A and by this reference made a part hereof.

This Agreement may be amended at any time by mutual agreement and the parties further agree that it may be terminated by either party upon two (2) weeks written notice, for good cause shown, which causes may include, but are not limited to, a failure of payment or nonpayment by BPA, a failure of performance or nonperformance by either State Agency in such manner as to jeopardize the timely completion of the services by the State, or any other action which makes the completion of the contract impossible or unnecessary.

Nothing in this Agreement shall be construed to limit, repeal, or in any manner modify the existing legal rights, privileges, and obligations of the parties hereto as provided by contract, agreement, cited statutes, or any other law or applicable court decision, and all commitments under this Agreement will be performed consistent with both parties' legal obligations and authorities to comply with State and Federal statutes and regulations.

Done at Helena, Montana, the day and month above set forth.

Director, Department of Natural
Resources and Conservation

Director, Department of Health
and Environmental Sciences

Administrator
Bonneville Power Administration

7597B

MONTANA POWER COMPANY MPC GENERAL OFFICES 40 EAST BROADWAY BUTTE, MONTANA 59701 • TELEPHONE 406/723-5421

ROBERT J. LABRIE
SENIOR VICE PRESIDENT
ENGINEERING AND TECHNOLOGY

March 10, 1982

Mr Marvin Klinger
Assistant Administrator for
Engineering and Construction
Bonneville Power Administration
P O Box 3621
Portland, OR 97208

Dear Marvin:

This letter will present our views regarding the first three items of information requested of BPA by Leo Berry, Director of the Montana Department of Natural Resources and Conservation, in his March 8, 1982 letter to you. While we do not agree that much of the information requested is germaine at this time to the question of compliance by BPA with the "substantive standards" under the Major Facility Siting Act, we nevertheless submit the following:

1. If Colstrip Unit #3 is completed on schedule ready for turbine roll in October 1983, but the 500 kV transmission circuits from Colstrip to Broadview to Townsend to Garrison and the Garrison Substation are not completed by that time, the unit will sit idle until the transmission facilities are completed. Then testing and shakedown can be accomplished with commercial operation to follow about three months later.

   Without the 500 kV transmission facilities in place to and including Garrison Substation, there is no transmission capability available on the underlying system to accommodate Colstrip Unit #3 power. The system is only marginally capable of handling all of Colstrip Units #1 and #2 power because of the delays already suffered by the 500 kV project. That project was planned to enhance the reliability of transmitting #1 and #2 power in addition to handling #3 and #4 requirements.

   The costs of Unit #3 sitting idle awaiting transmission are estimated to consist of two major items:

   A. the difference in fuel cost between oil or gas fuel for replacement energy (if available) and the replaced coal fuel; and

   B. the additional interest cost (or AFUDC) which would accumulate during the delay.

   These costs are estimated at 78.3 mills/kWh of lost production capability and about $10,000,000 per month of additional AFUDC (see Attachment A). These costs, of course, ultimately will be borne by our ratepayers.

ATTACHMENT A

For each month of delay in completing the transmission, these costs will ultimately amount to $30,000,000 (525,000 average kW X 730 hours/month X 78.3 mills/kWh) in replacement power costs plus $10,000,000 additional AFUDC; a total of $40,000,000 per month, based upon full load operation. It is assumed that the value of the surpluses is the fuel savings.

Ignoring any revenues from surplus sales and evaluating only the cost of replacement power to cover the deficits would result in a total cost of $20.5 million per month.

Our latest composite tabulation of the projected loads and resources of the five participants in the Colstrip Project indicate surpluses and deficiencies beginning in the operating year 1983-84 as follows. These figures are taken from unpublished data just now being prepared for the Annual PNUCC Regional Forecast to be published later this spring. We believe that these average energy figures are accurate, but that the peak figures understate the deficits from those that will be ultimately used, because complete analysis of the reserve requirements has not yet been made.

Figures Are MW	1983-84		1984-85		1985-86		1986-87	
With Critical Water	Peak	Avg	Peak	Avg	Peak	Avg	Peak	Avg
Composite Surplus/ (Deficit) With Colstrip #3 and #4	1,266	23	559	(176)	394	(127)	(6)	(203)
Composite Surplus/ (Deficit) w/o Colstrip #3 and #4	671	(185)	(36)	(579)	(796)	(959)	(1,196)	(1,123)

2. There are no cost-effective management alternatives to completing construction of Colstrip Unit #3 in accordance with the present schedule. To delay the schedule would result in additional AFUDC of approximately $10,000,000 per month plus estimated additional construction management costs of about $5,000,000 per month. In addition, any substantial delay now would expose the Project to potential claims by subcontractors and vendors for their costs of delay and for extended warranties. The extent of such potential claims is undetermined.

There are no reasonable, short-term transmission system alternatives available to accommodate any substantial portion of Colstrip Unit #3's 700 MW of generation. The existing system is marginal with only Units #1 and #2 power and cannot accept additional Unit #3 power absent the 500 kV transmission.

There are no paths through Canada and no paths through Wyoming and Idaho which are not already marginal in their ability to transmit their own requirements to the West from base-load coal-fired units in Wyoming and Colorado.

Very truly yours,

Robert J Lalor

RJL/DBG/jd
Enclosure

cc: Leo Berry - DNR&C
WP Schmechel
DB Gregg
JL Peterson
DE Olson

ATTACHMENT A

Estimated Costs of Delay for Colstrip Unit #3

Cost of Energy Purchases - If Available

Estimated cost of natural gas or oil for boiler fuel in 1984 delivered to a gas- or oil-fired plant in the Northwest = $7.12/million Btu.

(This compares with Canadian natural gas delivered to Billings for the Bird Plant in 1981 @ $5.33/mmBtu. The estimate is derived from Data Resources, Inc's forecast of world oil prices and is equivalent to processed oil delivered in 1984 at $42.70/barrel.)

Estimated cost of coal at Colstrip for Units #3 and #4 in 1984 = $11.37/ton = $0.661/million Btu.

(This compares with a January 1, 1980 contract price of $8.17/ton. Escalation of indexed costs is estimated by Western Energy Company at approximately 80 cents/ton/year for four (4) years to 1984.)

Unit cost of gas- or oil-fired energy = $7.12 X 10^{-6}/Btu X 12,000 Btu/kWh = 85.44 mills/kWh.

Unit saving of coal energy not generated at Colstrip = $0.661 X 10^{-6}/Btu X 10,800 Btu/kWh = 7.14 mills/kWh.

Difference = 85.44 - 7.14 = 78.3 mills/kWh.

Estimated Cost of Colstrip Unit #3

Estimated Cost of Colstrip #3 to 1/1/84	:	$ 534,380,000
Estimated Cost of Common Facilities to 1/1/84	:	285,527,000
Estimated Cost of Colstrip-Townsend Transmission to 1/1/84:		190,374,000
Total Cost for Colstrip #3 to 1/1/84 (Excluding AFUDC)	:	$1,010,281,000

Estimated AFUDC Rate in 1984 = 12% = 1% Per Month

Senator MELCHER. The memorandum of agreement for future lines; is that it?

Mr. BERRY. Yes, it is, Senator.

Senator MELCHER. Would it involve the Garrison to Idaho boundary line?

Mr. BERRY. Likely not, Senator. The agreement calls for the State to be involved in the initial scoping meetings that were mentioned, the base line valuation, the setting up of the contracts, the joint writing of the impact statement. As I mentioned in my testimony, Bonneville has moved through a significant portion of that process already and so we're playing catchup on that part of the line. The State's substantive involvement has just recently occurred, so it will likely apply to future Federal projects. The Colstrip or the Garrison west line will be handled under the other attached agreement that I have incorporated in the testimony.

Senator MELCHER. Both of these proposed agreements will be made part of the record and they're very helpful. The second agreement that you're talking about is the agreement involving the $370,000?

Mr. DRIESSEN. That's correct, that applies to the Garrison west portion of the line, Senator.

Senator MELCHER. Does it envision other alternatives in what has been suggested on that map?

Mr. DREISSEN. The memorandum doesn't speak to alternatives. The State has taken the position that we are not limited to the alternatives that Bonneville incorporated into their draft statement. In fact, we have notified Bonneville that one of the alternatives we're looking at is a reconnection of the line from Garrison back to the original State-approved line through the Jocko and the Flathead.

Senator MELCHER. Isn't one of the problems of going across the Flathead trying to avoid agricultural land?

Mr. BERRY. Certainly. In any area, it would be a problem, Senator. The original plan as proposed by Montana Power would be to parallel an existing transmission facility and there is an existing Bonneville corridor through that area, so you balance weighing a new route, a new line versus parallel and the existing line and that would have to be a sight by sight determination.

Senator MELCHER. Even though you parallel it, I guess you can't avoid interfering with the farming activity, though, can you?

Mr. BERRY. If it's there, you would expand the impacts, there is no question about that.

Senator MELCHER. All right, thank you very much.

Now, we're going to hear from a panel of John Muster, county commissioner from Sanders County, and Tom Marvin, county commissioner from Mineral County; Bob Palmer, county commissioner from Missoula County, and Bob Deschamps III, county commissioner from Missoula County. While the next panel is assembling, we need a little break at this point. There will be a 5-minute break.

[Recess taken.]

Senator MELCHER. The subcommittee will come to order. We'll proceed now with this panel of county commissioners. Is Mr. Deschamps here?

Mr. PALMER. No.

Senator MELCHER. We have three county commissioners earlier identified. We'll proceed now. Do you have any particular order you'd like to follow?

Mr. MARVIN. No.

STATEMENT OF BOB PALMER, COUNTY COMMISSIONER, MISSOULA COUNTY

Mr. PALMER. I'll go first. For the record, my name is Bob Palmer, Missoula County commissioner. I'm going to be briefing my remarks today. I think our court case that we have filed with BPA speaks for the specific issues of Missoula's concern with regards to the BPA. But I do have a couple of points I want to make and I'll be glad to answer any questions that the Senator or anybody might have.

First of all, I'd like to thank Senator Melcher for providing us with the opportunity to testify about the concerns we have developed in regards to the administration and policymaking of the Bonneville Power Administration.

In general, we in Missoula County have been most concerned over the Bonneville Power Administration's lack of accountability. This lack of accountability has shown up in four areas. We have sought to address some of these concerns through the courts and we believe that even if the courts decide against us, that our concerns are legitimate. Therefore, we are looking to you, Senator Melcher, for legislative relief if we cannot secure the relief through the courts. These concerns are as follows:

One, the route of a power line that will carry electricity from Colstrip to Spokane. As you know, this has been the focus of most of our attention and it exemplifies the BPA's account. Here we have a case where a private utility subject to fairly stringent regulations who chose to excuse itself from the effects of those regulations by turning over to the BPA the building of those transmission lines and as a Federal agency, the BPA claims that it is no longer subject to those regulations. The result has been in litigation of various kinds, but it all comes down to the basic point that the original route that was approved by the Board of Natural Resources, we believe was the most appropriate one and the Bonneville Power Administration, by building and rerouting those lines, have provided an opportunity for the Montana Power Co. to escape the requirements of the Major Facilities Siting Act as well as the issue of taxes.

Second, impact aid payments. The Northwest Power Regional Power Act authorizes the BPA administrator to provide impact aid to local governments that's incurred expenses as a result of the powerline construction and maintenance. As you know, the BPA administrator is proposing to make a very narrow interpretation of the section of the act. We have testified and submitted written comments on the proposed impact aid rule of which I will submit to the committee after my presentation. In essence, we believe the impact aid must cover the true cost of the BPA activities including indirect costs, and not just the direct cost, and very specific ones at that, that the BPA administrator is suggesting. If BPA persists in this very narrow, and we believe unfair interpretation of their rule, we believe that the Northwest Power Act should be amended to specifically authorize aid to local governments to cover indirect BPA associated expenses and this brings us to the third point.

As you know, and as we have discussed with you in the past, we are extremely upset because of the fact that BPA does not pay taxes on its land and this is all the more outrageous because of the 500 kilowatt

powerline situation, because if Montana Power had built the line as was originally planned and should have, it would have had to pay local taxes, so in this case, not only has Bonneville's decision to build the line deprived the citizens of Montana in Missoula of the ability to control the siting of that line, but has deprived us of up to $1 million in property taxes that ought to have been paid to the property taxing bodies of Missoula County. Therefore, we recommend very, very strongly, if not a demand, that Congress amend Bonneville's authorization to enforce it to make payments in lieu of taxes. We believe that this is only fair and we know that you support us in this effort.

Finally, the fourth area that has been of concern and in which we believe progress has been made has given BPA an energy conservation focus.

Over the years, of course, BPA, like all utilities has believed that its first and foremost obligation was to provide as much power as possible. During the days of chief hydro, that rate was always sensible, but now that Bonneville has turned to nuclear power, it has become an economic nightmare for the entire Pacific Northwest and Bonneville's persistence in minimizing power production and its misguided interpretation of long-range needs in changes has brought the Pacific Northwest to the present WPPSS crisis. In fact, it was for precisely this reason that the Northwest Power Act was passed. We do support very strongly the intertization that the Northwest Power Council is taking and that BPA finally has become aware of.

In regard to this, we strongly support BPA providing energy conservation, funding, for such projects as weatherization, especially to low income individuals, alternative energy sources, billing credits and the like. We first, in all honestly, note that the BPA was one of the first alternative energy proceeders as hydroelectric power is an environmentally superior form of energy production compared to coal or nuclear power. We believe that Bonneville Power Administration has begun to develop a good program in terms of energy conservation, but it bears very close watching. There are many interests in the Pacific Northwest who believe that the BPA has no business getting involved in quote social programs unquote. We believe on the contrary that energy policy has now become a social policy and that all energy proceeders and WAPA-teers have to be aware of the social implications of their actions.

Again, I'd like to thank you for the opportunity to testify at this hearing and to thank you for all your help with BPA over the years. As I say, I'll submit a copy of my presentation and other letters of correspondence that we have made to Bonneville Power and to the various hearings that have been held in the past. Thank you.

Senator MELCHER. Thank you, Bob. John Muster, county commissioner of Sanders County.

STATEMENT OF JOHN MUSTER, COUNTY COMMISSIONER, SANDERS COUNTY

Mr. MUSTER. Thank you, Senator Melcher for the privilege of coming here today and testifying. I was held up in court today so I didn't get a written statement for you, but basically, from Sanders County, we're on the northern route here, Plains, Hot Springs, up through

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Prospect Creek, down over to Taft, above Taft, some of that would come in. Our area has more impact on the farmers. Its one route is about 70 percent on private land. It goes up to narrow valleys. The green on your map is basically Forest Service land, the lighter colors is private land. I own a farm that's blessed with two powerlines right up the middle of it, one a 230 Bonneville and one a 230 Washington Water Powerline and I have made money in the past being a contractor on powerlines, so I'm fairly familiar with it.

From Anaconda to Hot Springs, I've walked all that whole line, at least in the Montana Power section, and I do think probably some more effort should be looked into the Jocko site. I realize it goes through the reservation, but I walked that Anaconda to Hot Springs because I had the job of turning the crank, seeding for the roads, and so forth like that, and so I walked it and it is a site I think that should be looked at, although it does go through the reservation in the south fork of the Jocko, which is more or less a tribal area that, you know, the Indians don't wish any more power lines in. I respect their views on that, but I think it is probably a lot less impacted than say Missoula or some of the other areas that have been suggested, but back to the commissioner's point of view.

In Sanders County, the impact aid, the direct costs, if it went through Sanders County, would be minimal, maybe we'd get a bridge, I don't know. If Montana Power built the line, at least as far as Hot Springs, it would improve our tax base quite a little. I don't know, $500,000, maybe more. If they continued on, it would probably be upwards of $1 million. The projections for the northern tier pipeline were over $1 million, not in actual cash, in taxes rather than tax base, so as you can see, it would go through us a long ways and with the unemployment in the timber industry, we really do need these taxes and I think payment in lieu of taxes, at least for the new lines, is an order, is in order, especially when this line was sold to the people with the idea that it would be built by a private company.

Montana Power in the past has used Montana contractors quite extensively, hired Montana labor as much as possible. I was disturbed this morning to hear that 50 percent of the steel is being bought in Japan on one section. I get a steel magazine from the office and I think that steel production in the United States is something like 43 percent last month of capacity, so I know the folks back east or where the steel mills are are interested in that and that disturbs me, too.

We feel that through Sanders County, more of the line could have been put on Forest Service land rather than private land. We realize it would probably cost more, but we're losing the—Lawyer Nursery has lost a lot of potential in their nursery business because of two powerlines directly underneath them. They're the larger employer in agriculture in Sanders County. They're worldwide. They ship stuff worldwide and they're concerned, and we need those jobs and if you stick another powerline down there, there is some more jobs going down the tubes. Unless it can be put on Forest Service land and through that narrow valley, it's very hard because of the rock cliffs and so forth, so, you know, if you choose the northern route, we're going to lose some jobs, and, you know, we're concerned about that. We don't necessarily want to push it down in Mineral County either because they have probably the same situation. The other thing we'd

question was actually the need for this power over on the west coast. The WPPSS power has been closed down and we kind of question whether this line is really needed right now. Maybe it is, I guess that's for you folks to decide.

The other thing that disturbed us in Sanders County is where I went to a couple of the scoping meetings in Thompson Falls. I went to one in particular and not one person spoke in favor of the powerline. Everyone spoke against it, for various reasons, but if it does have to be built, I think we want to try to get it in Forest Service land as much as possible and to do the least amount of damage to the environmental, no matter which route we so chose. If it costs a little more, you know, our rates never go down anyway, so, you know, if the gentleman in Portland has to pay a dime more for his power bill a month, I can't really see why that's a big problem. We're the ones that are faced with the powerlines and we feel that, you know, we should spend a little more time on putting good site selections so they're not visible and so they're also not hurting the agriculture production in our area. Thank you, Senator Melcher.

Senator MELCHER. Thank you, John. Tom Marvin, County commissioner for Mineral County.

STATEMENT OF TOM MARVIN, COUNTY COMMISSIONER, MINERAL COUNTY

Mr. MARVIN. Thank you, Senator. I guess I might preface my statements with a couple of things. First of all, I don't really have anything prepared. I spent a great deal of time studying the EIS material and testifying at the BPA hearings, but I guess my point is that it's very difficult to be objective in this whole thing, and so I want to preface my statement with one thing. I guess about the only thing I agree with in the EIS is the recommendation for no action. Now, I'll take it from there. There is some real problems in my dealing with EIS and with where the proposed route would be. The methodology and the analysis that are in those documents are an incredible maze of things which are hard to assess. We had our EIS hearings and yet the public really had no way to cope with those so-called measurements and instruments that were used. I understand a lot of what the BPA did with their scenic evaluation and so on, that it was highly subjective, although they never really explained at how they arrived at those measures with us.

One particular point of concern that I have from Mineral County has already been pointed out by Senator Melcher this morning and that was with his questions as to another alternate or southern route. When BPA held their EIS hearing in St. Regis, they were asked by one of the local people, why haven't you considered the CC Divide as an alternative, and in most faces, there was total puzzlement. I don't think any of them knew where it was. So, I'm wondering if that jives with what was said this morning by some of the distinguished people from BPA.

Another thing, of course, I will echo Mr. Palmer and Mr. Muster's concern over payment in lieu of taxes. We met with BPA last year and they sat down and said, "Hey, fellows, we're going to give you some impact aid here." We said, "OK, what's it going to entail?" Well,

we really don't know. We want you to dream that up. We don't have any guidelines, but we're going to do something for you. We spent a great deal of time trying to figure out what those impacts really were going to be, but I don't think we got much satisfaction from BPA in terms of their commitment to meet most of those impacts because they were all perceived as payment in lieu of taxes. Classic example is the man, one owner in our county has written and said, if you punch that power line through my property, don't expect me to pay the same rate of taxes on my property because it's not going to be worth that anymore. My scenic quality has just disappeared. What are you going to do with those people? What would the local tax appeal board do with them? Reduce the taxes, probably, but that impact can't be recognized. We never have given any data as to the equipment that's going to be used. How are we supposed to figure out the impact on our roads and bridges when we don't know what's going to go over them, what it's going to weigh, where it's going to go? I have some other questions that are sort of generated from this morning's testimony.

I wondered who the environmental people quote that BPA used that rated the southern route as the environmentally preferred route, who those people really were, because the whole evolution of the EIS process leaves me in a quandry.

First of all, BPA was designated as the lead agency. To me, that defies all logic. Second, when they open up the Missoula area for additional scoping because of protests concerning where the corridor was going to go, why did they ignore the rest of the route? We never had any scoping sessions. We're part of the same route that Missoula is, but that never came about. We had lack of appropriate materials, particularly in maps prior to being able to comment on the EIS hearings. I guess I could go on and on. I hope that the committee will at least in their infinate wisdom, try and look at some alternatives to what already exists. Our county is about 92 percent, I guess, federally owned. We are a reservation, we have no taxable evaluation. We have the highest tax school district in the State. We have no way to expand and anything that touches our taxable base right now is, it's really fragile. so I guess I'm urging that something be done for payment in lieu of taxes. It's conceivable that without it, in combination with some other economic factors, that a county like Mineral County could go bankrupt. Who wants to take them over? Missoula, you want them? I doubt it. Thank you.

Senator MELCHER. Thank you, Tom. Payment in lieu of taxes is generally thought of, at least I think of and I think most members of the committee think of it, as to mean to pay the identical amount of taxes as if the transmission line were owned by a private utility company. That, of course, is set by the county and State, and I don't think it's anything vague or hard to understand, and whatever the ups and downs are in taxes, in mill levies, it's readjusted. I don't think there is any other viewpoint of what payment in lieu means in this regard, when it's used for publicly owned powerlines. It's that simple. It was the language that we used in the proposed WAPA legislation. It was recommended to us by WAPA, part of WAPA is eastern Montana. You get east of the divide a little ways, you're out of Bonneville Power area and you're into the WAPA area. I think that payment-in-lieu language should mean just what I said for any new transmission

lines, and it would not be retroactive. It would be for two lines under construction and all lines in the future. Bonneville sees it as somehow settting the stage for retroactivity to lines already constructed.

Now, that isn't the way it's drafted and I don't think it would create that. Of course, it would lead to retroactivity. It would, in one area, solve some of the problems Bonneville has had with this proposed line. It does not solve them all, as you've all testified, but it is just out of fairness for the individuals that live in the counties and communities that are impacted. I don't like the term impact aid at all, because I don't know what it means and I assure you that as far as I know under the Northwest Power Act, all it means is what the administrator says it means. I don't think there is any other definition for it than what the administrator says it means and it's so vague and hit or miss that I wouldn't recommend it at all, but I strongly do recommend to the Senate committee and to the Congress itself to act on this payment in lieu as I've just described, for not only this line, but all future lines built by public power groups.

I want to compliment all of you because you do represent the broad cross-section of the interests of your respective counties and it's reassuring to me that county commissioners are directly involved with this entire process. We're going to find a good solution, we're going to find it jointly with the help that county commissioners can render on behalf of their counties.

The issue in my judgment is finding a good solution. Tom Coston, you've noted by previous testimony, will make the key decision on approval of the environmental impact statement on approval of the right-of-way, of permit, and which by the way, for the right-of-way permit across Federal land, fair market value will be assessed and collected. Federal Government does not leave itself open to nonpayment of their privilege and that opportunity for a right-of-way will be at fair market value for every foot of the right-of-way that is granted across Federal land. So, in a sense, the Federal Treasury collects its part on Federal land, but Congress hasn't seen fit to allow for payment of taxes, and that is necessary and essential for county and local government or county and city and town government to meet their costs, supply their needs for their people. Thank you all very much.

We have a panel of two, I believe, Wilbur Anderson, general manager of Vigilante Electric Co-op and he represents the Northwest Public Power Association and is from Dillon, and Mr. Gary Mason, manager of the Ravalli County Electric Co-op from Corvallis. Wilbur, I think you're first.

STATEMENT OF WILBUR L. ANDERSON, GENERAL MANAGER, VIGILANTE ELECTRIC COOPERATIVE, INC., DILLON, MONT.

Mr. ANDERSON. Thank you, Senator. We appreciate the opportunity to be able to present some comments at this hearing. For the record, my name is Wilbur Anderson. I'm manager of Vigilante Electric Cooperative at Dillon, Mont. and immediate past president of the Northwest Public Power Association. Our service area, by the way, includes portions of nine counties here in southwestern Montana, including a part of Clark County in northern Idaho, so we serve

10 counties. There seems to be a misunderstanding from the previous testimony as to where the money comes from on the question of in-lieu-taxes.

All of our revenues come from our consumers that is paid each month through their power bills. When you speak of in-lieu-tax payments being made by either a publicly owned system such as ours or a privately owned system such as Montana Power, you're talking about those customers paying just this much more each month on their power bills, so I think we ought to have that fact clear in our mind at the outset.

You're talking of just adding onto the consumer's bill each month, whatever that cost might be, and in the case of the publically owned systems who are Bonneville customers in western Montana, you're talking about all of the rural people in western Montana paying these additional costs, and it's not confined to the Portland area as one witness testified. Vigilante Electric started receiving wholesale power from Bonneville Power Administration in 1967. For 29 years prior to this time, Vigilante purchased power from Montana Power Co. The cost of this power was about 30 percent higher than the power from the Federal dams on both the Columbia and Missouri River Bay. It would be impossible to calculate the economic and social benefits that BPA power has brought to western Montana consumers through the cooperatives and the investor-owned systems as well. The availability of good dependable reasonable priced power has proven to be the very life blood of our agricultural economy here in Montana.

Bonneville Power made available to large industries, such as the aluminum company of Columbia Falls, Staufer Chemical at Butte and a large number of wood products industries has provided thousands of jobs to Montana residents. For many years, the power generated and used in Montana was supplemented by power over BPA transmission lines into western Montana from the Columbia River Basin. In recent months, the news media has carried statements by State, congressional, and environmental leaders charging that BPA is a big joint Federal agency trying to run roughshod over western Montana. These charges are totally unfounded and untrue based on past and present operations of this agency. Complete environmental, economic and social studies are made of all of their proposed projects prior to construction and these facts speak for themselves.

The existing law provides that neither the Bureau of Reclamation nor Bonneville Power transmission and other facilities need comply with the rules and regulations of this act. Recent court rulings confirm that these additional costs and delays to these agencies and ratepayers in Montana are not justified. There is clearly no good reason to burden Montana consumers with added costs when many families without jobs can hardly meet their power costs now. Other critics have suggested that BPA should make the in-lieu-tax payments to State and counties where facilities are located. No one here today has yet mentioned the positive impacts that this kind of construction would provide for western Montana. Jobs, additional income for businesses and other benefits, these are impacts, also.

BPA operates on a self-financing basis, so all costs are actually paid by the consumers each month in their power bills, as I said earlier. I would like to point out that BPA ratepayers are now paying $6 million

a year for the Regional Power Council, $10 million a year for fish and wildlife programs, and $300 million a year for conservation programs in the Northwest. The BPA customer systems and consumers on those systems, including those here at western Montana, are certainly paying for the benefits of this transmission line. There is no need to impose new and added taxes or costs on Montana consumers. There are some things that can be done to improve relations between the State of Montana and Bonneville Power.

First, consider the economic and social consequences of not having enough power for farms, ranches, businesses, and the small amount of industry we have here in Montana. Two, realize that the growth rate on Montana BPA cooperative customers in western Montana is three to four times the projected medium growth rate of 1.6 percent. Three, understand that the primary thrust of our economy is based on an adequate dependable supply of energy.

Four, realize that a progressive economy is the only way we can provide jobs for people and alleviate unemployment. Five, understand that because of our economic potential, the Intermountain West is probably the fastest growing, faster developing region in this country. Because of a growing export demand for food, the regions whose economies are based on agriculture, new technology, and energy resources are going to develop and continue to do so, and finally, consider the values that built this site and made our country great while working together for the mutual good in solving our energy needs. Thank you.

[The prepared statement of Mr. Anderson follows:]

PREPARED STATEMENT OF WILBUR L. ANDERSON, GENERAL MANAGER, VIGILANTE ELECTRIC COOPERATIVE, INC.

Mr. Chairman, members of the subcommittee, my name is Wilbur Anderson, manager of Vigilante Electric Cooperative at Dillon, Mont., and past president of the Northwest Public Power Association. I appreciate the opportunity to present some comments at this hearing.

Vigilante Electric started receiving wholesale power from Bonneville Power Administration in 1967. For 29 years prior to this time, Vigilante purchased power from the Montana Power Co. The cost of this power was about 30 percent higher than the power from the Federal dams on both the Columbia and the Missouri River basins. It would be impossible to calculate the economic and social benefits, that BPA power has brought to western Montana consumers, through the cooperatives and investor-owned systems as well. The availability of good, dependable, reasonable priced power has proven to be the very lifeblood of our agricultural economy here in Montana.

Bonneville Power, made available to large industries such as the aluminum company at Columbia Falls, Stauffer Chemical Co. at Butte, and a large number of wood products industries, has provided thousands of jobs to Montana residents. For many years, the power generated and used in Montana was supplemented by power over BPA transmission lines into western Montana from the Columbia River basin.

In recent months, the news media has carried statements by State, congressional, and environmental leaders charging that BPA is a big, giant, Federal agency trying to run roughshod over western Montana. These charges are totally unfounded, and untrue, based on past and present operations of this agency. Complete environmental, economic, and social studies are made of their proposed projects prior to construction—and these facts speak for themselves.

State and other officials insist that BPA transmission projects should come under the most restrictive and oppressive major facilities siting act in the West. Existing law provides that neither Bureau of Reclamation nor Bonneville Power transmission and other facilities need comply with the rules and regulations of this act. Recent court rulings confirm that these additional costs and delays to

these agencies and ratepayers in Montana are not justified. There is clearly no good reason to burden Montana consumers with added costs, when many families without jobs can hardly meet their power costs now.

Other critics have suggested that BPA should make in-lieu tax payments to the State and counties where facilities are located. BPA operates on a self-financing basis, so all costs are actually paid by the consumers each month in their power bills. I would like to point out that BPA ratepayers are now paying $6,000,000 per year for the Regional Power Council, $10,000,000 for fish and wildlife programs, and $300,000,000 for conservation programs in the Northwest. The BPA customer systems and consumers on those systems, are certainly paying for the benefits of this transmission network. There is no need to impose new and added taxes nor costs on Montana consumers.

There are some things that can be done to improve relations between the State of Montana and Bonneville Power:

1. First, consider the economic and social consequences of not having enough power for the farms, ranches, businesses, and small amount of industry we have in Montana.
2. Realize that the growth rate of BPA cooperative customers in western Montana is 3 to 4 times the projected median growth rate of 1.6 percent.
3. Understand that the primary thrust of our economy is based on an adequate, dependable supply of energy.
4. Realize that a progressive economy is the only way we can provide jobs for people and alleviate unemployment.
5. Understand that because of our economic potential, the Intermountain West is probably the fastest growing, fastest development region of our country.
6. Because of growing export demand for food, the regions whose economies are based on agriculture, new technologies, and energy resources, are going to develop and continue to do so.
7. And finally, consider the values that built this society and made our country great—while working together for the mutual good in solving our energy needs.

Senator MELCHER. Thank you, Wilbur. Gary, why don't we hear from you now and then we'll get to questions later after you testify.

STATEMENT OF GARY D. MASON, GENERAL MANAGER, RAVALLI COUNTY ELECTRIC COOPERATIVE, INC., CORVALLIS, MONT.

Mr. MASON. Thank you, Senator. I appreciate the opportunity to comment on this. I've got several comments along with testimony. One of them is, western Montana will utilize this transmission line to a great deal. The electricity won't be shipped in from the west coast to service western Montana. In other words, the kilowatt hours don't pass each other. It's all dumped into a pool and we draw on it as we need it. OK; virtually like Mr. Wilbur said, the people in western Montana will be paying this in lieu of taxes. This would also include the Montana Power Co., Pacific Power & Light through surplus power exchanges, liening agreements, and exchange agreements if the Montana Power Co. signs the exchange agreement. The percentage of BPA lines in Montana is very small and it amounts to 5 percent of their total lines.

It's our concern that Montanans would receive a very small portion of this and, in turn, pay Idaho, Washington, and Oregon a large amount for the majority of the lines that are in those other three States and it concerns us very much that the amount we pay would not go to Montana, it would go to the other States. As for the siting of this particular line, it's very delicate. If you'll remember back quite a few years, there was a proposed line to go through the McGruder Corridor and it was shot down. I think that if that corridor and a couple of other

corridors had been retained open, this wouldn't have to be on our back doors. I think it would be in a place where it wouldn't impact us near as much as this does. We need to get it settled because every expense that BPA incurs comes right back to the ratepayers, and people in western Montana and all over are paying for it just as much, so we do need to get it settled, I feel, in a very environmentally, economically and everything sound way. Thank you.

[The prepared statement of Mr. Mason follows:]

PREPARED STATEMENT OF GARY D. MASON, GENERAL MANAGER, RAVALLI COUNTY ELECTRIC COOPERATIVE, INC. CORVALLIS, MONT.

My name is Gary D. Mason and I am the General Manager of the Ravalli County Electric Cooperative, Inc., at Corvallis. I am here to testify against any requirement that would cause the Bonneville Power Administration to pay payments in lieu of taxes, as all the costs incurred by BPA, including the cost of transmission lines, purchased power, maintenance, hearings, administration, etc., are eventually passed on to their consumers. Those consumers are 34,000 people served by the electric cooperatives in western Montana, all of the Flathead Irrigation Project consumers, Pacific Power and Light in western Montana, and the Montana Power. The Montana Power and Pacific Power and Light pay a portion of BPA's expenses through the purchase of surplus power, wheeling agreements, and exchange agreements, if they sign the exchange agreements. Therefore, all of western Montana is affected.

As the percentage of BPA's lines in Montana is very small compared to their total plant (5 percent), Montana would receive a small portion of the payments, but the people of western Montana would pay through their rates a large portion Washington, Oregon, and Idaho. Through all this, we have another built-in, hidden tax.

We believe it is better to pay a tax as a tax to our local governments, not a hidden tax in our electrical rates.

The siting and location of this line should be settled as soon as possible, as all changes and delays become a BPA expense which is passed on to their consumers.

Total BPA miles of line equals 13,290.

BPA miles of line in Montana, 667.

Senator MELCHER. Gary, what do you mean the amount of paying what in taxes? Which taxes are you talking about?

Mr. MASON. Payments in lieu of taxes. We pay, this is charged in the rate base of the people in western Montana into the electric rate base, and we only have 5 percent of the lines in this State and we started precedence or like you're talking, enacted through Congress. Then we are afraid that Washington, Oregon, and Idaho would receive, because of the amount of lines they have in there——

Senator MELCHER. You're talking about old lines, though, aren't you?

Mr. MASON. Right.

Senator MELCHER. Not the proposal as far as any new construction.

Mr. MASON. I haven't seen the proposal. I'd be glad to study it for a minute.

Senator MELCHER. Well, you might look at the WAPA bill that was proposed a couple of years ago, about 7 years ago and was introduced in Congress. Look at that original language.

Mr. MASON. If it was equitable so that the people in western Montana didn't have to pay per person or per meter more than the people in Washington and Oregon and all over, then we could sure take a look at it.

Senator MELCHER. What do each of you have in terms of customers?

Mr. MASON. Residential consumers, we have 3,028, I believe.

Mr. ANDERSON. We have about 4,000 residential consumers.

Senator MELCHER. Well, when you say 4,000 or 3,000, there may be several meters on a farm or ranch. Is that——

Mr. ANDERSON. Excuse me, we have a total of 5,000 total meters.

Mr. MASON. And we have 4,040, total.

Senator MELCHER. What is Bonneville Power costing you with the rate right now?

Mr. MASON. At the present time, it's approximately 1.2 cents going to, I can't pull that figure out of my head. The increase would be at 60 percent.

Senator MELCHER. Sixty percent over 1.2 cents?

Mr. MASON. Yes.

Senator MELCHER. End up close to 2 cents then per kilowatt.

Mr. MASON. Yes.

Senator MELCHER. The jump is this year?

Mr. MASON. October 1, 1982; right.

Senator MELCHER. Let's see—that would be close to 20 mills; it would be about 19 mills.

Mr. ANDERSON. Yes.

Senator MELCHER. Has there been a drop in consumption this summer?

Mr. ANDERSON. We haven't noticed a drop in consumption largely due to our large amount of irrigation and load growth.

Senator MELCHER. Will there be a drop in consumption when it rises close to 20 mills or 2 cents?

Mr. ANDERSON. We don't anticipate that there will be because of the investment they've made in these systems. Our growth rate is going to be in excess of 6 percent this year for our system.

Senator MELCHER. But that's at 1.2 cents.

Mr. ANDERSON. Yes, wholesale, and our retail is something over 2 cents now.

Senator MELCHER. What would your retail be when you're close to 2 cents?

Mr. ANDERSON. Approximately 2 percent greater than our present retail rates.

Senator MELCHER. Just add another two-tenths on that and it would be about a little over 2.1 or something like that. That would be around 21 or 22 mills. Has Bonneville consulted you satisfactorily about these rate increases?

Mr. ANDERSON. I would say they've given ample opportunity at both hearings and customer meetings and then as well as other local requests or compliance with those requests for meetings on rates, yes.

Senator MELCHER. Do you vary your rates summer season, winter season?

Mr. MASON. No, not for the residential. The only difference is, of course, the irrigation, which is just a summer load anyway.

Senator MELCHER. That's at the same rate? I understood your previous answers to mean that that was at the same rate. It is not at the same rate.

Mr. MASON. Irrigation is not at the same rate as residential.

Senator MELCHER. And what is it?

Mr. MASON. $7 horsepower charge, which is $7 per horsepower and 2.3 cents per kilowatt-hour and it is going to 3.4.

Senator MELCHER. It's going to be higher. Won't that have some effect upon your load growth then?

Mr. MASON. It's very possible that it has. We've had to raise the rate an additional amount for BPA above Wilbur's system. We have anticipated a drop in the number of consumers. We have not heard any or got any indications of too many people dropping just because of the rate. We left the horsepower charge at $7 to give people a chance to diversify their crops or put in grains, alfalfa, or anything else, so they would have some control over it.

Senator MELCHER. What's been the reason for the recent increase has nothing to do with Colstrip or Bonneville's transmission line. It has something to do with Co-ops, does it not?

Mr. MASON. Well, basically it's picking up conservation. It's picking up the Regional Power Council which is a big expense, and it's also——

Senator MELCHER. Well, I notice Wilbur talked about, I think, $10 million. No $6 million. What does the average Vigilante Co-op member get out of that $6 million?

Mr. ANDERSON. I think it remains to be seen if we get anything substantial out of this council at all.

Senator MELCHER. Well, let me know when you get anything out of that $10 million for fish and wildlife programs, well you? Either one of you. I think it might help with the State of Montana and what have you, but I'd like to see part of that just sort of backed into Montana. Maybe we'll see some of that, but $6 million and $10 million and then $300 million, the $300 million is a real notable item. You're saying, Wilbur, that that's per year?

Mr. ANDERSON. I'd like to——

Senator MELCHER. Or 5 years?

Mr. ANDERSON. I'd like to explain this conservation budget. Next year, it will be borrowing $250 million just for conservation. By the time that borrowing is amortized, the total cost will be $300 million, so that's for 1 year, and that's the budget for this coming year 1983.

Senator MELCHER. Now, isn't that $300 million, isn't that to avoid building any new power generation?

Mr. ANDERSON. Yes, sir, it is. It's one of the primary purposes of the programs.

Senator MELCHER. Is it directly or indirectly connected with WPPSS whether they're forced to complete shutdown of the WPPSS plant? What does that mean to you?

Mr. ANDERSON. It means that with increased efforts and conservation, perhaps it will delay somewhat the need for new plants, but with our constant load growth and the predictions of 40 million more persons here by the year 2000, we're going to need a new Bonneville powerhouse every year.

Senator MELCHER. I'll separate my question. What does it mean to you, what does WPPSS shutdown mean to you and the Vigilante Co-op members?

Mr. ANDERSON. We are a participant in those plants. We have, at this point, an indebtedness that we will be paying off on those plants. We're very hopeful that the other three plants, 1, 2, and 3 can be completed as rapidly as possible because our projections indicate that power is certainly going to be needed.

Senator MELCHER. The additional charges to you, going from one point opposed to two, is principally because of WPPSS, is it not?

Mr. ANDERSON. No, those costs of four and five are borne separately by our participant systems.

Senator MELCHER. What about the shutdown? How much did it cost to shut down whatever was shut down?

Mr. ANDERSON. You're speaking of plants 4 and 5?

Senator MELCHER. I don't know.

Mr. ANDERSON. Plants 4 and 5 were terminated and shut down and the cost of doing this or the cost of the indebtedness up to that point in the construction was $2.2 billion. There are some additional termination costs and they range in estimate from $300 to $500 million to finally terminate those plants. Plant 1 has been slowed down, but 2 and 3 are being completed as quickly as possible.

Senator MELCHER. What does that indebtedness of $2 billion plus another $0.5 million for closing costs mean to your customers?

Mr. ANDERSON. Without the sale of either one of those plants for a number of facilities and equipment they have in place, it will impact our system by approximately $7 million.

Senator MELCHER. Can you give me that in terms of mills per year?

Mr. ANDERSON. No, sir, I can't.

Senator MELCHER. Would it be a couple of mills, 3 or 4 mills?

Mr. ANDERSON. Perhaps so.

Senator MELCHER. Somewhere between 2 and 4.

Mr. ANDERSON. We feel like there will be a more favorable resolution to this problem.

Senator MELCHER. But as of right now, you're looking at something between 2 and 4 mills just because of that.

Senator ANDERSON. I would say so.

Senator MELCHER. As you well know, the protection of preference rights was enacted in the portion of the Northwest Power Act. What's the latest, if you could separate out what you had before and what you've been having to buy this year? Do you have a separate figure on what the additional power is costing you in terms of the mills per kilowatt?

Mr. ANDERSON. You're speaking before the passage of the act and since the passage.

Senator MELCHER. Well, I'm just speaking about this year. You got the blended price, you share in the water power and the system, which is very low compared to what would be from nuclear plants or even from Colstrip 1, 2, 3, and 4—3 and 4 in this instance. The blended price is still based on some very cheap power.

Mr. ANDERSON. Yes, sir, it is.

Senator MELCHER. What I'm trying to figure out, I guess, is what does this more than recent cost cost you if you can originate it from the original to cheap water power?

Mr. ANDERSON. About a 100-percent increase in the last 3 years have been our rate increases and I think Colstrip 3 and 4 are projected to come on line about 5.2, approximately?

Senator MELCHER. Delivered or——

Mr. ANDERSON. Bus bar, I think.

Senator MELCHER. I don't know, the last I heard it was 43, but that can change. It generally goes up. It never seems to say the same.

Mr. ANDERSON. We are participants in the Kootenai River project and Gary has some figures.

Mr. MASON. This is department of natural resources statement on the Kootenai project, and BPA in 1903 will be at 19.6 mills. The

Kootenai project in, when it comes on line, the first year would be at about 57, Colstrip comes on line at about 40 and Broadwater at about——

Senator MELCHER. Well, Colstrip what? Colstrip 1, 2?

Mr. MASON. Three and four.

Senator MELCHER. Comes on at what, 40 what?

Mr. MASON. Forty mills.

Senator MELCHER. That's what he means. Not 43?

Mr. ANDERSON. That has escalated since this was published.

Senator MELCHER. What year is this?

Mr. MASON. Well, they come on in 1986, when it comes on.

Senator MELCHER. What year——

Mr. MASON. Just last year.

Senator MELCHER. Well, the figures I had have been 43 mills and everything is going to be cheaper than that, then that's great, but what you really said though, Wilbur and Gary, is that you've had about what, a 100-percent increase, but that's still an increase of the blended price of the cheap power. What I was trying to get at is what is new power costing? Isn't new power from Colstrip a lot cheaper than any nuclear power that will ever be out there on the west coast?

Mr. ANDERSON. I was not in the long term because——

Senator MELCHER. Let's figure out for any new nuclear plant, and I mean the one under construction which is 70 some mills. Have they got a miracle out there? We'll get Mr. Frick back here to ask him that, if there is some way it's going to be cheaper.

Mr. ANDERSON. Perhaps in the 10- to 15-year period, coal fired could be cheaper, but when you look at the 50-year period, I would say nuclear is going to be cheaper than coal in all parts of the country.

Senator MELCHER. Well, I don't know. We still don't, you know, we still don't have a price tag on what you're going to do with the waste, and I don't have that answer. Do you have that answer?

Mr. ANDERSON. The technology is here for several methods of handling the disposal of that. I would say whether Congress bites the bullet on which method they wish to choose, I think there are several safe methods developed.

Senator MELCHER. Well, I'm not going to pass judgment on the safety aspect of it, but I'll pass some judgment on the cost of it, and I don't know that anybody would be very practical about it that has come up with a storage cost for the waste. I'm not going to talk about reprocessing, that's a different decision, but storage of those rods that does not come up with 10 mills plus, now, I don't know who can tell us that they're willing to take that stuff and do everything they're supposed to do, which is like a perpetual guardian on into the next 1,000 years or somewhere in there, of safety on it. I can't envision what this is going to cost. Maybe we get into reprocessing. Staff advises me that cost of decommissioning a nuclear plant after it's done with, whatever that is, has never been contemplated, has never been estimated and looks staggering. So I, frankly, can't envision any nuclear plants under construction now. OK, to these two items, they're certainly going to have to be paid for. Anything less than 70 mills, it might be way above that.

What I'm trying to get is preferenced customers or not. When you got to buy new power, you're going to get the best deal possible,

the best deal that is allowed from WAPA or Bonneville Power and other people are going to pay a little bit more so that you maintain that best deal, but it's going to cost pretty much whatever the new power costs. So if the future of the Northwest is supposed to be nuclear to accommodate all these additional people that may or may not come into the Northwest, I think you might as well face the facts that they're going to be paying a great deal more for nuclear generated electricity than they've ever paid, and it is acting like it's just going up gradually. That new power is tremendously high and these costs really haven't been in there yet. I know some people say well, don't worry so much about waste storage because we're going to develop a process for reprocessing it that will be relatively cheap and relatively safe. It's the relatively safe part that scares everybody and it's the relatively cheap part that we haven't been able to figure out what that means. You know what Colstrip 3 and 4 is going to cost at a certain point. It seems to me the 40 mills is too low and that you're probably going to be higher than that, but you don't have to worry about decommissioning Colstrip 3 and 4 and you don't have to worry about getting rid of the waste because that isn't inherited in that system, so, enlighten me, Gary.

Mr. MASON. Well, one thing, this is basically a concept of the council, is to have a smorgasboard type, not necessarily all nuclear, coal, anything, so that they can have whatever is needed at the time. The controversy between coal and nuclear has been going on and it will be long. You've got your acid rain and your coal. What's Canada going to do to us? So, you know, we've got problems in both aspects and we realize that.

Senator MELCHER. I don't think there is any acid rain connected with Colstrip 1, 2, 3, or 4, is there?

Mr. MASON. I hope not, but there is a lot of claiming going on by Canada and other parties.

Senator MELCHER. Well, there is better technology coming on with Colstrip 1, 2, 3, and 4. Dealing with the acid rain and Clean Air Act is our part of it and I don't believe we've received one iota of testimony that Montana coal created or added to any problem that anybody has envisioned as being theory or otherwise as being the cause of acid rain or is connected with high sulfured coal. Well, there is a lot of theory and conjecture as to what causes that acid rain. None of the testimony that I've heard or been aware of by the scientists has indicated that low sulfur western coal has ever been a contributor to the theory of what does cause acid rain. They're always trying to come up with high sulfur research——

Mr. ANDERSON. I have one more comment, Senator, on the nuclear versus coal. I think the problem of waste and disposal is going to be largely solved when we complete the research at the Clinch River project in Tennessee on this fast breeder technology along with the companion projects at Hanford, because we have right now, 500 years of supply on hand in Tennessee for these plants which will provide us with an unlimited amount of power and not use up our natural resources of coal and gas and oil, and this is the only real long-term solution.

Senator MELCHER. Yeah, but as a businessman, Wilbur, you have to face up to the fact that—I know of no method of converting a

light water reactor, one of these nuclear plants that's under construction into a breeder. So, that cost is there.

Mr. ANDERSON. What I'm speaking of is taking these waste materials, which are radioactive, and utilizing them as partial fuel in the fast breeder type of reactor, and this is what I'm saying about the disposal of radioactive wastes.

Senator MELCHER. I don't think it fits, though, because you use, what is it, 10 to 15 percent of the energy in the rods for white water reactor? I believe that's about right, so you've got about 85 percent of the radioactive material there, the breeder doesn't use much at all, that's supposed to be the miracle, the breeder becomes practical. They don't use much fuel, so we still have the problem of waste disposal of the existing light water nuclear reactor, that's everyone we've got, and you're hooked into with your cooperatives, you're hooked into, I think, if you're going to buy nuclear in your projected load growth to ever increasing and staggering increases in power costs. I don't think it's very much of an argument that's going to go on forever. I think the pendulum has already swung. It was great over this year.

The father of the nuclear Navy very candidly testified to the Joint Economic Committee in Congress, he felt that there should be no more nuclear generating plants, period, that they were a waste, that they were creating problems, that they were totally out of all cost effectiveness and that we've gone down that road far too long, so I don't really see the argument being continued between the advantage of coal and nuclear. I see it having dramatically shifted and that the argument is no longer there. That the cheaper, more efficient way is coal, even with the inefficient way we've got it. When you get 15 percent of the energy out of the rods, nuclear rods, we only get 36 percent, 35 percent efficiency out of the coal burned in Colstrip 1, 2, 3, and 4, so we're a long ways from getting good efficiency out of the material consumed, but frankly, a lot of us believe that MHD will be that answer to take the next jump up to getting 50 percent efficiency out of the coal, maybe 55. Some people, some reports have indicated it could well be up in the upper fifties, and so it seems to me that whatever problems we have with strip mining of coal are less than the problems we have with the safety and environmental problems right now with a light water nuclear reactor, and so whatever costs are entailed in there, you're stuck with it and that doesn't say to me that you ever get it. The cost of that new power created by that method is going to come back down to 40-some mills for Colstrip 1, 2, 3, and 4.

Mr. MASON. Senator, that's exactly part of the reason. That is exactly why we are in the Kootenai project, trying to develop that, to keep costs down. We do understand that the projects that are, would start today as nuclear projects would be an excessive amount.

Senator MELCHER. I don't want you to misunderstand me. The figures that I'm quoting you are 70 mills. Are those the ones that are under construction now?

Mr. MASON. That would be in the price range, somewhere in the neighborhood with units 4 and 5, that we were nearing somewhere in that range.

Senator MELCHER. All right, WPPSS 4 and 5. Well, I don't want to make your life any rougher than it is. County commissioners have their own set of problems, which I always sympathize with. County

senators do too, by the way, but managers of the electric co-ops these days have an unusual amount of problems on their hands. I'm glad you both survived your latest annual meeting. I hope that continues.

You come down rather strong against payment in lieu of taxes, but you are familiar that WAPA has recommended it and has drafted the language and asked for it to be enacted by Congress. Not on old lines, but on new lines.

Mr. ANDERSON. I wasn't aware that Bob MacPhale had favored such a thing, because as I——

Senator MELCHER. I took the language right from it.

Mr. ANDERSON. As one commissioner commented here, he said Bonneville should definitely pay taxes on their facilities. They're no different as a Federal agency than the Bureau of Land Management, the Forest Service, should they now be paying taxes on their facilities and their property. Let's extend this a little further and let's include all the rest of these Federal agencies.

Senator MELCHER. Well, I think they're a little different.

Mr. ANDERSON. I don't see these as being much different because you're talking about one kind of Forest Service facility and here's a Bonneville facility.

Senator MELCHER. Well, they're a little different. You pay taxes, you do, on your buildings, and on your trucks and everything. Bonneville isn't any different than you people. They're not, really. As far as a Federal agency, which is sort of in between everything else, they're given—you see the Northwest Power Act is a good example of it. That gives a terribly broad authority to the administrator, much more than we give to the Secretary of Interior or Secretary of Agriculture or Tom Coston, the regional forester, and while we do look at their budget, we don't—it's just looking at them. We have some influence when we look at them, but that's about it.

Mr. ANDERSON. The difference primarily, though, with BPA being on a self-financing basis, we are the ones that are paying that bill every month.

Senator MELCHER. I well understand your point there. It's well made, it's well taken. Thanks a lot both of you. I hope that you can be successful in maintaining fairly well decent prices for your customers. They are extremely important because Montana agriculture producers are really the backbone of this entire country. Thank you both very much.

Our next witnesses will be a panel of a Mr. Lee Tavenner, Granite County Alliance from Hall; Mr. Larry Dodge, Upper Blackfoot Property Owners Preservation Association, Helmville; Mr. Ed Koffman and Mr. Bill Barrett, Clark Fork Protective Association and Northern Plains Resource Council in Missoula, and Mr. Gregory Kennett, Big Horn Property Association, Huson; and Mr. Andy Kulla, St. Regis and Superior Property Owners, St. Regis. Are you all here?

Mr. SANSOM. I'm here for Andy Kulla.

Senator MELCHER. I think you're lined up from east to west, so let's have Lee Tavenner first.

Mr. TAVENNER. Senator Melcher, I represent the Granite County Alliance and we have basically two different issues that we're dealing with and for the first part of this, I'd like to turn it over to Adele Furby who is chairman of the Granite County Alliance.

STATEMENT OF ADELE FURBY, CHAIRMAN, GRANITE COUNTY ALLIANCE, HALL, MONT.

Ms. FURBY. I want to thank you for an opportunity to appear today. The Granite County Alliance is an organization formed in January 1982. It currently has about 60 active members, most of whom live in the Maxville and Hall areas in the lower Flint Creek Valley. The large majority of the people who live and work in the Maxville area who have property which would be affected if BPA constructed a power line along current proposed roots are members of our organization.

One of the main goals of the Granite County Alliance has been to participate in the establishment of a centerline in our area which would be the least objectionable environmentally and also the least objectionable for the residents and property owners. It was clear to us from the beginning that the route proposed by BPA was one of the worst possible routes that could have been selected. Granite County, a large county with a population of about 2,500, is very thinly populated, and yet BPA has managed to site a powerline less than a quarter of a mile from the fourth largest population center in the county. We recognize that communities from Colstrip to Spokane have been agonizing over the dilemma of where to site this line, so we are not alone, but we believe that we do have a unique situation in the Maxville area in that immediately south of town the land is almost 100-percent Federal land with no permanent residences for 9 miles. We believe that the least objectionable route could be found in that area.

On April 22, 1981, BPA held its public meeting on the draft EIS in Philipsburg. At that time, six members of the Alliance presented prepared statements on behalf of the Alliance. I am submitting these statements to you today in written form. They cover the following subjects: The inadequacy of the factual data in the EIS as it pertains in our area. The dismal public involvement job done by BPA in our area. Socioeconomic factors not dealt with by BPA, the mitigation measures we consider necessary if a line is sited, a presentation of the Corridor E, a corridor south of Maxville developed by the Alliance which we have proposed that BPA use in siting the line, and a comparison of Corridor E to the BPA route which showed, using BPA data and maps, that our corridor is superior from the standpoint of hydrology, wildlife, land use constraints, acquisition costs, mass movement potential, big-game sensitivity, forestry, erosion susceptibility, recreation and cultural resources and a discussion of the question of need. This testimony took over an hour to present and although I feel that it is important that you acquaint yourself with this material, I realize that time restraints preclude it from being read aloud today, but I feel that it is important to point out that all of the public meetings which were held from Garrison west last April, both the BPA officials present and the aides to the congressional delegation informed us that our presentation was the best organized and most persuasive of any given.

Following that hearing, Mr. Jerry Frick, project engineer, approached us and asked that we get together with him to discuss the situation. He admitted at our meeting that the draft EIS was totally inadequate in our area and promised that the BPA would take our suggestion seriously for developing a possible route through our Corridor E. Senator Melcher and members of the Energy Committee, we have

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been attempting to see that Bonneville hold true to that promise ever since, and I am sorry to report that we have gotten absolutely nowhere. Bonneville has continued to use the same sleazy tactics in order to attempt to keep us from our goal of siting this line properly.

We have made and will continue to make good faith efforts to see that this thing is done properly, but we don't hold much hope. I could take the rest of your day outlining to you the problems that we have had since April dealing with BPA. I will be glad to fill you in with all the gory details if you so request, but that is not the main point. The main point is that we want to get this line cited properly and in the proper location and we are willing to go out of our way to do so. We know the country, we know the people and we know it needs to be done. We earnestly seek your help in absolutely insisting that Bonneville do this job right and in that regard, we are at your disposal.

This is a Federal project, utilizing Federal law. Therefore, it is your responsibility to see that the law is upheld and that we taxpayers are not getting shafted once again by an agency of the Federal Government. Thank you.

Senator MELCHER. Thank you. We have this additional material which will be made part of the record. I think, Lee, you had a statement, too, do you not?

STATEMENT OF LEE TAVENNER, ASSISTANT CHAIRMAN, GRANITE COUNTY ALLIANCE, HALL, MONT.

Mr. TAVENNER. Yes. I'd like to thank you Senator Melcher for scheduling this hearing. The resistance to this powerline is widespread. The outrageous behavior of BPA is well documented and bitterly resented in this State. This powerline, its associated powerplants, and the inevitable future powerlines will cause such impact to the Montana environment and will so upset our Montana way of life, that even the most ardent of growth advocates must gaze into the crystal ball with alarm and dismay.

Need, the essential principal of condemnation of land for powerlines is the public need. Without public need, there are no condemnation powers for private or public entities. This powerline absolutely depends on condemnation of an entire strip of land across most of the State of Montana and yet none of the agencies involved has ever addressed the issue of need for this twin-500 kilovolt 5,000 megawatt powerline.

Certificate of need: In 1976, the Montana Department of Natural Resources recommended against construction of Colstrip 3 and 4. By four-to-three vote, the board of natural resources overruled the department, but the resultant so-called certificate-of-need never discussed or analyzed the amount of power needed, the size of powerline needed, the existing loads, the location of loads, or the existing transmission capability. The data in the certificate of need was not sufficient to establish a need for any transmission at all, let alone the need for a twin-500 kilovolt 5,000 megawatt powerline. What information was offered in 1976 was based on a different location, a different builder and a different tax situation than the current line.

Bonneville Power Administration EIS: Bonneville's Garrison-Spokane and twin 500-kV powerline environmental impact statement

dismissed need in one page without backup data. There was no discussion of amount of power needed, the size of powerline needed, the existing loads, the location of loads or the existing transmission capability. Although the reason for having an EIS is to assure minimum environmental impact, BPA did not establish a need for any environmental impact, nor did BPA establish or even discuss the need for a line of 5,000 megawatt capacity. BPA did not discuss any smaller powerline alternatives even though the National Environmental Policy Act directs an alternatives comparison approach to EIS preparation. Clearly such blatant avoidance of the need issue violates congressional intent in NEPA.

Judge Batton's rulings have centered around whether State or Federal agencies have authority in the matter of this powerline. His complex rulings have missed the essential point that without establishing public need, no agencies, either Federal or State, have the authority to condemn land for powerlines. Although legal manipulations may mask this governmental intrusion, the principle of public need being essential for condemnation is well established. Nowhere in Judge Batton's ruling is there discussion of the amount of power needed, the size of powerline needed, the existing loads, the location of loads or the existing transmission capability.

Montana Facilities Siting Act: Although need for the facility is the first item on the lists of requirements under the Montana Facilities Siting Act, the board of natural resources chose to ignore their mandate in reviewing the town by ignoring the issue of need. The board used Judge Batton as an excuse, but Judge Batton's rulings left plenty of room for discussion of the amount of power needed, the size of powerline needed, et cetera. The board's mandate and Judge Batton's ruling required that the board examine a question of need in relationship to the amount of power needed, line size, et cetera.

Congressional authorization: BPA has gone to great lengths to extend its reach by reference to congressional authority through Public Law 95–482, but that authorization, unclear and controversial as it is, is only for quote facilities to integrate and quote Colstrip 3 and 4. If Colstrip 3 and 4 can be integrated with a 12-kilovolt line from Hot Springs to east Hot Springs, then construction of that line is the complete extent of congressional authorization. Public Law 95–482 does not excuse BPA, Judge Batton or the State of Montana from addressing the question of need. Rather, it instructs all of them to determine the size, the length and the extent of needed transmission to integrate Colstrip 3 and 4.

No need: There is no need for a twin-500 kilovolt 5,000 megawatt powerline from Garrison to Spokane. There is no need for a single 5,000 from the Garrison to Spokane. There is no need for a twin-230 kilowatt powerline from Garrison to Spokane and under present load conditions, there is no need for another single-230 kilovolt powerline from Garrison to Spokane.

To elaborate, let me examine three interpretations of need. In the first case, let's assume, as BPA and Montana Power do from time to time, that need is based on generation capability rather than load demand. Although I strongly disagree with this approach, it will illustrate the most extreme case. The west coast consortium's share of Colstrip 3 and 4 is 980 megawatts. Montana Power's load is almost

entirely served from Garrison and east. The capacity of the two 230 kilovolt lines from Anaconda to Hot Springs is about 800 megawatts. If the entire portion of the west coast consortium's power were transmitted from Garrison to the BPA grid, the two 230 kilovolt lines would carry all but 180 megawatts. To contend that a twin-500 kilovolt line with 5,000 megawatt capacity is needed to carry 180 megawatts of power is ludicrous.

Until the second case, let's assume need is based on market availability rather than generation capability as Montana Power sometimes does. The WPPSS Plants in Washington were mothballed primarily because of lack of need. If the BPA "one utility concept" is used to arrange exchange agreements in the northwest as Bonneville's involvement requires, then the west coast consortium shares in the Northwest's lack of need and the consortium must find markets other than the Northwest for its Colstrip power. Including the present two 230 kilovolt lines from Anaconda to Hot Springs, there are seven 230 kilovolt lines extending out of Montana with a total capacity of 2,800 megawatts of power. This 2,800 megawatt capacity should be more than sufficient for the consortium surplus sales of 980 megawatts of power and to contend that an additional twin-500 kilovolt 5,000 megawatt capacity line is needed, it is ludicrous.

If generation capability determines need, then construction of a 5-million megawatt plant would create a need for a 5-million megawatt powerline regardless of whether or not the electricity could ever be used. If market availability determines need, then stockholder wealth and public need are equated and Montana Power's ability to market power determines the public good. The only reasonable measure of need is load demand and even load demand must be offset by extremely high environmental costs such as with coal-fired plants and long powered lines.

For the third case, let's assume need based on load demand. The mothballing of the WPPSS's plants illustrates the lack of need in the area of the west coast consortium and with the required exchange agreements no added transmission is needed from Garrison to Spokane. Furthermore, at present load, Montana Power can serve its load west of Garrison from Garrison without additional lines and it does not need to import BPA power from the 500 kilovolt grid, so no additional transmission is needed.

Need is to not build. I contend that beyond the clear lack of need for this twin-500 kilovolt 5,000 megawatt powerline, there is, in fact, a strong national public need not to build this twin 500-kV line. At the Board of Natural Resources hearing, Montana Power submitted information concerning disturbances to the western power supply grid. Although it was not Montana Power's intentions these reports show most clearly that the larger grid system is extremely sensitive and vulnerable to chain reaction collapse. In one disturbance, a lightning strike on the Arizona-Utah border caused an extensive outage in the Western States including a large portion of Montana. In another outage, a minor control problem at Grand Coulee, blacked out most of Montana. Some of these outages occurred when the entire grid was lightly loaded and others occurred when small portions of the grid were heavily loaded.

These reports show that the large grid system is vulnerable to failure, and the result of even very small problems is very large outages.

As the grid system grows, so grows the interdependence, so grows the tendency toward failure and so grows the area and severity of the outages.

This proposed twin 500-kV powerline is a major link in connecting west and midwest power grids in a much larger grid, because any large grid system can be crippled by a single attack. This power line is a direct threat to national security, both from external sources and from internal sabotage. The public interest shows a clear need not to build this twin-500 kilovolt 5,000 megawatt grid interlink.

Congress. The most often repeated complaint is that there is no need for this powerline and that the issue of need has never been addressed. The people of Montana understand that the mandate of their governments has been abrogated as BPA carries out a massive condemnation action without any regard, discussion or consideration of need for this huge powerline.

Because of BPA's clever humanization of Public Law 95–482, Montanans see Congress as coconspirators in Bonneville's assault on the property rights of the State of Montana and its people. BPA has effectively manipulated Public Law 95–428 from an authorization for quote facilities to integrate end quote and from an endorsement from a grandiose grid-ti interconnection whose capacity is more than twice of the entire output of the whole Colstrip complex. In so doing, BPA has made Congress and every Senator that voted for Public Law 95–482, its errand boy.

I appeal to you, Senator Melcher, and other members of the Senate Energy Committee to set the record straight. Insist that congressional authorization is for quote facilities to integrate and see that the issue of public need is addressed. Preserve the integrity of Federal condemnation by directing the BPA to shrink this powerline down to fit the public need.

I appeal to this Senate Energy Committee to direct BPA and the Montana Board of Natural Resources to one, study and address the issue of need regarding the size and layout of this powerline, and two, develop alternatives using smaller powerline options, and three, hold public hearings on their findings, and four, revise the transmission line plans to stay within the public need requirements of congressional authorization and condemnation principles.

The integrity of this committee is at stake. The integrity of the Senate is at stake and the integrity of condemnation law is at stake. Thank you.

[Material submitted by the Granite County Alliance follows:]

INTRODUCTION

The Granite County Alliance is an organization formed January, 1982, soon after residents in the Maxville and Hall areas became aware that the BPA had plans to put a twin 500kv power line through the Maxville area. The membership list I am submitting with this statement is a list of the individuals who wish go go on public record as making the following statements which are given by representatives on behalf of the Alliance. Furthermore, the Alliance requests that all statements made at this meeting, as well as all comments submitted during the public comment period be fully considered and reproduced in their entirety in the final EIS. No summaries, or deletions should be made.

GRANITE COUNTY ALLIANCE MEMBERSHIP AS OF APRIL 22, 1982

Adele Furby, chairman, Maxville
Lee Tavenner,assistant chairman, Maxville
Evelina Anderson, secretary, Hall
Gordon Foster, assistant secretary, Hall
Dave Hauptman, treasurer, Hall
Corolyn Dennis, assistant treasurer, Hall
Sam Dennis, Hall
Bill Dennis, Hall
Barbara Conn, Hall
Leonard J Connors, Sr., Princeton
Leonard J Connors, Jr., Princeton
Pat Perry, Drummond
Arthur Kolbeck, Hall
Evan Kolbeck, Hall
Mike Conn, Hall
Laura Ledbetter, Maxville
Rita Conn, Maxville
Mary Rodgers, Maxville
Charles H. Dringle, Philipsburg
Casey Carson, Maxville
Janel Gowen, Maxville
Frank Wallbillig, Philipsburg
Carl L. Cassidy, Maxville
Jenny Cassidy, Maxville
Ray Lucier, Maxville
Robert Spitzer, Maxville
James E. Maehl, Maxville
Grace Maehl, Maxville
Clayton Herron, Helena
Kenneybelle Metcalf, Drummond
Kelly Spitzer, Maxville
Dale Martin, Maxville
Randy Martin, Maxville
J.C. Mercer, Maxville
Bill Wight, Hall
Albert Boomer, Hall
Bobbie Strand, Maxville
Evelyn Boomer, Hall
Keith Graybeal, Hall
Helen Konda, Maxville
Judy Hogan, Hall
Tom Hogan,Hall
Dan Hauptman, Hall
Marilyn Dagel, Philipsburg
Marvin Dagel, Philipsburg
Leland Skaw, Hall
Gayla Skaw, Hall
Herb Skinner, Hall
Bev Skinner, Hall
Elsie Skinner, Hall
Ruth Shea, Maxville
Tom Svoboda, Hall
Lynn Svoboda, Hall
John Conn, Hall
Darlene Conn, Hall
Dwight E. Hauptman, Hall
Ruth Hauptman, Hall
Mary Faye Conn, Hall
Jerry P Koon, Missoula
Janet Koon, Missoula

MICHELE SARE
STAR ROUTE
HALL, MONTANA 59837
April 22, 1982

The Draft EIS for the Proposed Twin 500-kV Line Virtually Ignores the People Living In and Around Maxville, Montana.

I am Michele Sare. I live at Stone and am representing the Granite Co. Alliance. The topic with which I am dealing, in reply to the EIS, is the repeated error and/or deliberate omission of the consideration of the fact that there are 50 people living within one mile of the proposed "Taft Route."

The BPA contends that the proposed Twin 500-kV Line will be be constructed as a "service" to the public and, that the public, the consumer, in fact, "demands" more service; that it is "necessary." Ironically, the BPA has forgotten to consider what the public has to say about the proposed line, about the entire project. Indeed, the BPA remarkably forgot to consider that there is a significant population in Maxville. This is evident from particular, glaring omissions in the Draft EIS - Appendix D - Social et Economic Considerations. The erroneous, and / or misrepresented "so-called" data is almost too voluminous to address. There are however several major points - as they related to the consideration of citizens - taxpayers - consumers. Some of the more appalling highlights are:

1) The population in Maxville was never considered in the Draft EIS. In-fact, individual residences in Maxville were not counted (by the BPA) until March 25, 1982! There are 27 residences in Maxville, withing 1 mile of the proposed line, with a total of 50 people. There is also a 200 plus lot plotted as subdivisions in Maxville.

2) Maxville was never in the computer figures as an urban or dispersed development area; rather, the socio-economic impacts as they relate to wildlife in the Maxville area were given priority. Why are human beings excluded as a significant participant of the environment? On pg. 2-17 the BPA is so remissant as to state; "...density of landowners --does not measure the potential for any specific type of socio-economic impact...."

3) The counting of communities (not wildlife but, <u>people</u>) was done <u>after</u> the corridor and route selections were made. There was <u>no</u> distinction made between Missoula, Maxville or other smaller communities; all received a rating of "1". As if there is no difference in population, characteristics, etc.

4) Under the BPAs listing of socio-economic criteria for determining "impact ratings", the segment dealing with Maxville, shows there to be "low" socio-economic consequences in the Maxville area. These factors include: health risks, public annoyance, inconvenience, depreciation of property values, alienation, etc. That Maxville received a "low" rating is not difficult to understand, considering that the BPA never considered Maxville to begin with!

5) Later on in this bureaucratic monstrosity, precociously called an "EIS", the line (Taft Rt.) was shown as being within a ½ mile of Maxville (as it relates to "community incidence measure"). Then however, in the "Impact Summary - Urban/ Residential Form - and the "EIS Environmental Consequences" their previous statement, that a community existed within a ½ mile of the line, was not considered or addressed.

6) The socio-economic report on the Maxville area was not delivered to the BPA until Sept. 23, 1981. Therefore, it could not have been used as an impact factor when the decision was being made on either the corridor and route selection or on alternative route selection comparisons. This is in direct violation of the N.E.P.A. regulations.

7) Numerous other areas with less population were listed as a concern in the"Environmental Consequences". Somehow, Maxville was not noteworthy.

8) The BPA considered several factors that are route-specific. For example: "slope" of the land through which the line may possibly travel is dealt with on several accounts et given a great deal of gravity - as it affects determining a route. One astronomically important factor that the BPA has never considered as a route-specific variable is that of health. Time et time again the BPA skirts the issue that there is significant evidence of profound ill-health effects in direct relation to a twin 500-kV line. In true patronizing bureaucratic form, the BPA tries to assure us that there are really no ill-helath effects of any concern. In-fact, in their "Possible Health Hazards of a T500-kV line" report, the continually refute contradictory studies (studies that do indeed raise serious health hazard concerns) and support only those studies done by researchers that are on the BPA payroll. History has given us all too many tragically appalling catastrophies that were a direct cause and effect relationship to a "supposedly" safe project with grim long-term ill-effects. I wonder what the warnings would be of those suffering from leukemia in Nevada - as a direct result of the neclear tests, or of those individuals suffering the results of biological warfare testing, or those with the more subtle - still unclear - effects from herbicides et pesticides. What would they say to the warn-out phrase "the health hazards/effects will only be minimal." One BPA official went so far as to state "You'll get used to it. There's a little initial anxiety but, that won't last long."

9) The socio-economic considerations were not measured through reasonable parameters - giving "fair" weight to individual socio-economic criteria. In-fact, more attention was given to where the workers would live et eat and what nice guys they would be than to any possible long-term ill health of the people that live in the vicinity of this monstrosity. Also, the BPA is willing to bend-over backwards to paint the towers green so that they're a pretty color to minimize "eyesore" but, nowhere do they mention being willing to bend-over backwards to minimize ill-health effects.

10) What is the real socio-economic consideration here? Economics definitely are at the root of this project - and certainly not the economics of the citizens. It's the old product-consumer game. Create the product - do a good job marketing the product - and the consumer will then "demand" the product. The sales job isn't so good this time. Our rates stand to double-or greater- where is that addressed in the economic impact statement? In an area that is already so economically depressed how can we afford even more expensive utilities?

11) What of the specific ill health effects that individuals are suffering in increased numbers in areas where the only significant change in their habitat has been the construction of an auspicious powerline?

-What of the relationship between singlet O2 and cancer, nitrodioxide and cancer, PAN and diminished growth factors?

-What about noise pollution?

-Where does the EIS deal with coronal discharge? - With electrochemical pollution?

-What about ozone - not important enough to discuss?

-Where did they deal with the fact that in areas where "large" powerlines have been established for several years there is an increase in leukemias, central nervous system disorders, infertility rates in wildlife et livestock, mental/emotional disorders . . . and most likely, more, yet undetected, ill-health effects?

12) There are several "lifestyle" considerations:

A. The Forest Service et the the BPA are concerned about the visual impact of the line, where the line will cross the hiway, the length of the span - et how many travelers - along the Pintlar Scenic Route will be able to see the towers. One of the reasons people live in this valley is because of the scenery. Why is more consideration due to people that are passing through our valley - seeing the line for about ten minutes - than to those who will have a distorted horizon to view for the rest of their lives?

B. Another consideration of the ill-effects on lifestyle here in the Flint Creek Valley is that of interferring with recreational activites and for some - livelihood. For example; who wants to come to Big Sky Country - the Great Outdoors - to hunt under a powerline? A large part of the appeal of this valley is its impression of being relatively virgin land. Recreational activities add a substantial contribution to the economic base of Granite County. In an already economically depressed area where one of the only treasures that we are capable of preserving (hopefully) and utilizing, as an asset, is the valley's inherent beauty and, therefore is an attraction for recreational purposes. The powerline will be an astronomical blemish - a marker of progress that so contrasts with the spirit of the Montanan existence.

C. A third facet of lifestyle in the Flint Creek Valley that would be negatively affected by a powerline is that people here live here as a matter of choice. It is a population that is proud of its heritage. We choose to not be "city-fied". There are areas where technology is "beautiful" - et where some consider mammoth structures to be "magnificant". Here, we consider an undaunted horizon as being magnificant. The land is precious - precious as being as close to as it had been when our forefathers first settled the valley. Most feel that the landscape is already too cluttered, riddled by other monuments, and technological advancement. Historical significance of the area would be made a mockery of.

D. People living in this valley do not necessarily "demand" more electricity - or devices that consume more energy - in fact many who live here, do so because of the nature of rural communities - there is a lack of services - there are fewer "modern" structures - and that is the way many citizens of Granite Co. choose and certainly enjoy living. Rather that's saying people want to "get back to basics" or to live as much of an unadulterated life as possible - isn't really the issue. The concern is there should remain areas in our country where people can live as openly and as an integral of the environment as much as possible. The individual's voice should be heard. This is our home and that is, or certainly should be, a prime consideration of where this powerline goes. Indeed, rather the powerline should go at all.

E. A final consideration as it affects lifestyle - is that of "aesthetics". It is a basic human need, and right to derive enjoyment, aesthetic pleasure, from the environment. So many other areas of our country have been robbed of that right; many need to escape their dwelling et to travel hundred of miles to enjoy what complexity et beauty there is in nature. Why have we let so much technology run rampant that we need to put controls on development - that we found the need to create wilderness areas, etc.??

Why can't we be sensible about this forward plunge of "progress" - haven't we learned? Why can't "nature's harmony" be preserved where people exist - and not just in designated areas?

In summary - The EIS deals with several so-called socio-economic, route-specific variables, but few, if truly any, deal with direct effects on human beings. They talk about the "roads" - the "slope" - the impacts of line crews - the alienation - (the BPA sure doesn't want to make any enemies?) - the inconvenience (which on all accounts the BPA considers "slight" or "minimal") - the affects on our land - but, where do they address the direct affects on people; those issues that jeopardize our sense of security and well-being? What about all those human beings that the BPA forgot to count?

Respectfully submitted,

MICHELE SARE, R.N.

My name is Rita Conn, I am a member of the Granite County Alliance, for which at this time I am representing with the following statements on the BPA and its public involvement.

The alliance feels that the Bpa hasn't delt fairly with the public. In fact that the BPA hasn't delt with the public at all. Only with a small amount of people and those of the Bpa's own choosing. Being the public will end up paying for this proposed powerline the public has a right and must be delt with in an honest manner. I'd like to bring several items to the attention of everyone here.

(1) Comparison of News Paper ads, May 14 1981 to ad dated April 8, 1982. Maps are vague. April however is an improvement over May 81 but both still have their flaws. True the BPA did put the ads in the local paper so any one interested could attend the scoping meeting, but when the May 81 ad came out in the Philipsburg mail no one really south of Hall had ever been contacted by the BPA and in looking at May 81's map it shows not Hall or Maxville, or Philipsburg, it does show Anaconda, and Butte and these communities have ar are in no where near the proposed route. April 82's map although improved does show Maxville and Philipsburg does not show Hall. And the scale that the Maps are could have the line going any where north of Maxville, when we are under the impression that it passes ove the top of this small community.

(2) Mailing list: befor the scoping meeting in Drummond 1 person southofHallwasonthe mailing list... June 81-8 people south of Hall were on the BPA mailing list (3 were from Philipsburg. The Dart EIS had 16 people south of Hall of the mailing list and as of March 1 1982-22are on the list.

(3) Drummond scoping meeting was attended by 4 Hall-Maxville area landowners, and 3 Philipsburg people. The low turn out of concerned Hall-Maxville people isn't due to the fact that they didn't care but had not been informed by the BPA as to what was going on. The land owners who did attend the scoping meeting were not informed that their land was involve by the BPA but by another landowner from the Drummond valley.

(4) workshops: on page 11 of the Plan for Environmental Studies workshops were planned under phase III of the Routes Identifacation and Review. NO such workshops were ever held in the Garrison-Missoula study area.

(5) Also in fig. 3 of the Plan for Envirmental Studies Garrison-Missoula study are was planned to be done in ½ the time of the Hot Springs and Bell Sections of the line. This is comparing it to other studies in the Enviromental Studies.

(6) It seems that the last people who are informed of this line by the BPA are the people who become the most severly affected.. It seems as though its a hopeless and already to late to most of these people. Because its uaually to late to protest.

(7) BPA still hasn't listened to naything the Granite County Alliace has said since our Feb. 3 meeting in Drummond. And only recenly has said they have even locked in to other possable routes south of Maxville and this came out recently in the Missoulan. Stating that the BPA had studied at least 10 routes around Maxville this came as a great surprise to everyone sice we were told there wasn't time to do any more studies.

(8) The Granite County Alliance stongly feels that the landowners (no matter how small amount of land they own) MUST be notified directly by mail very early in the process so the land owner can be up on whats going on and that they can protest we request by mail because at least then the landowner has a record of proof and time when the Bpa comes for a visit so it doesn't end up being ones word against one another.

(9) BPA, in response to inquire, has provided no evidence that it tried to contact any landowners south of Hall other than 2 residences out of 38. These 38 are residences south of Hall, not all major landowners but will be affected all the same by this proposed line. The 2 land ownerscontacted by the BPA are 2 widows and had very frequent visits (sometmes) 6noccakweek. Mr. George Eskridge said at the Feb 3 meeting that it is very hard to get around to seeing everyone. Sure it is when you only go to two places out of 38 on a weekly basis. The same 2.... In the EIS it tells of community meeting in the Maxville area with Maxville residents and the Bpa on JULY 7 1981 to discuss a transmission line routing through this area.*******

* from the EIS appendix A

When asked the names of the residents who attended this meeting the Alliance was told it was confidental. Residents means several not one or two. Noone else knew of this meeting other than the BPA itself.and a few of the BPAs own choosing.

WANTED: YOUR VIEWS ON POWER LINE IMPACTS

Let's get together and exchange information on the Garrison-Missoula portion of the proposed Garrison-Spokane transmission line project.

We'll fill you in on the past, present and future of this project designed to help meet the power needs of western Montana as well as other Pacific Northwest areas.

Then we'll ask your help in identifying issues and concerns that should be dealt with in a revised environmental impact statement.

You'll also be asked to comment on the alternative routes (see map), one of which is to be selected for the proposed power line.

Finally, we'll answer any remaining questions.

The portion of the proposed 500-kilovolt line between the Garrison area and the Missoula area is a new addition to this project. Public meetings on the original Hot Springs-Bell project between the Missoula area and Spokane were held in late 1979 and early 1980. Follow-up sessions are contemplated later this year to bring citizens along that portion up to date on proposed routes and other facets of the project. Our need right now is to receive your comments and suggestions regarding the newly added portion. We're interested, for example, in any concerns you may have about effects on forests and other natural resources, on agriculture and other land uses, on undeveloped lands and recreation, on scenic values, on animals and on people.

We've scheduled six meetings, all beginning at 7:15 p.m. (doors open at 7 p.m.). Dates and locations are:

Monday, May 18 Drummond Community Ctr. Drummond, Montana	**Tuesday, May 19** Clinton School Clinton, Montana
Wednesday, May 20 Potomac School Potomac, Montana	**Thursday, May 21** Lolo Community Ctr. Lolo, Montana
Wednesday, May 27 Frenchtown School, Elementary Multi-Purpose Rm. Frenchtown, Montana	**Thursday, May 28** Village Red Lion Motor Inn 100 Madison Street Missoula, Montana

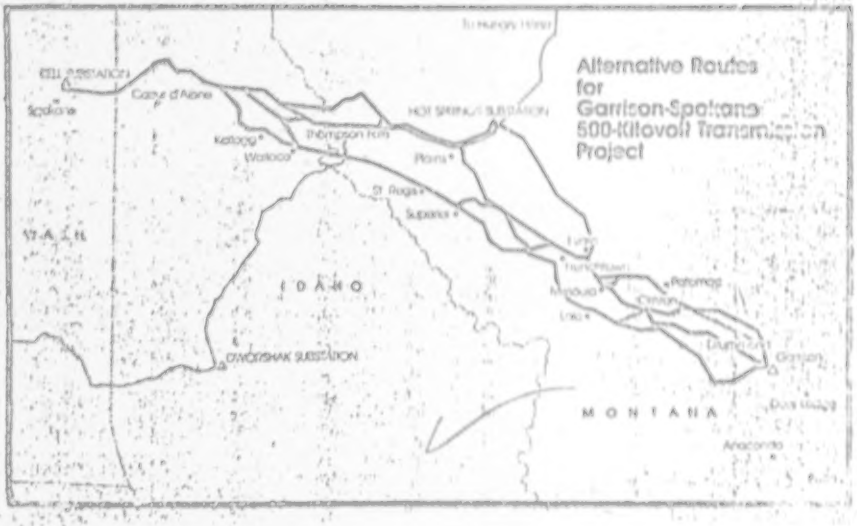
Written comments are welcome, too. Submit them at the meetings or send them by June 15, 1981, to:

George F. Eskridge
Projects Information Officer
BPA Transmission Coordination Off.
1620 Regent, Post Office Box 4327
Missoula, Montana 59806

For more information, write to the above address or call (406) 329-3737.

There is a best way. Together we can find it.

Bonneville Power Administration



Learn more about the project at an open house in your area.

Comment on the draft environmental impact statement during the 90-day public review period.

The environmental impact statement covers a 500-kilovolt transmission line proposed by Bonneville Power Administration between Dworshak, Montana, and Spokane, Washington, as well as 230-kilovolt transmission facilities proposed by the Washington Power Company in Idaho and Montana.

Written comments should be addressed to:

Environmental Impact Statement
Coordinator, ECN
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Formal comments may be delivered to:

Room 561
1002 N.E. Holladay
Portland, Oregon

Open House

7 p.m. to 10 p.m.
(See schedule for dates and locations)

- Personal meetings and displays
- Printed materials
- Answers to your questions

3:45 p.m. to 6 p.m. in Potomac, Lolo and Frenchtown

Agenda:

- Brief presentation on Environmental Impact Statement
- Statements and comments by the public

OPEN HOUSE SCHEDULE

Spokane, Wash. – April 12
East Valley High School Commons Area
East 15711 Wellesley

Coeur d'Alene, Idaho – April 13
Coeur d'Alene High
Cafeteria
Conkelson County Bldg. 4

Potlatch, Idaho – April 14
Potlatch High School Cafeteria
and Gym

St. Regis, Mont. – April 15
St. Regis High School Cafeteria

Libby, Mont. – April 19
Libby High School Multipurpose Room
3100 Pacific Avenue West

Drummond, Mont. – April 20
Drummond Community Center

Lolo, Mont. – April 21
Lolo School Gymnasium

Philipsburg, Mont. – April 22
Granite County Courthouse, Courtroom

Frenchtown, Mont. – April 26
Elementary School Multipurpose Room

Superior, Mont. – April 27
High School Multipurpose Room

St. Ignatius, Mont. – April 28
High School Library

My name is Mike Conn. I am a member of the Granite County Alliance for which I speak tonight.

The BPA has many faults as far as their maps are concerned. Some of them are:

No. 1: They have not shown Maxville as a urban/residential area in their land use land cover map, but that isn't suprising since they don't show Maxville in any of their EIS maps at all.

No. 2: Also in their agriculture map they show very few acres of irrigated farm land between Maxville and Drummond when in reality there are thousands of acres of irrigated land. We have the existing land use map of Granite County Montana printed by the U.S. Dept. of Agriculture and Conservation Service which this map was taken from and it shows a much clearer picture of how many irrigated acres there really are between Maxville and Drummond. Why was this change made in the BPA's agriculture map?

No. 3: Why isn't there a more southern route alternative over more public land? The two alternative routes the BPA shows goes approximately six miles of private land between Maxville and the West Valley. The BPA could have avoided much of this private land by going a little further south over or behind Henderson Mountain and Black Pine. This would also have taken advantage of the clear-cuts on Henderson and Black Pine.

No. 4: What is the matter with using steep terrain, because this land is the most unused by cattle, elk and deer. They don't like to graze on it because it has the least grass and browse. Steep terrain also is the least productive timber land because it mostly has small and stunted trees. From an economic standpoint the steeper terrain is the clear winner for the BPA's transmission line, but most importantly, the steep terrain being what it is has very few people around or close to it.

Statement for BPA Hearing, April 22, 1982

My name is Lee Tavenner. I would like to present the following statement on behalf of the Granite County Alliance.

METHODOLOGY

The original purpose of the NEPA legislation that requires impact statements was to protect the environment. The Bonneville Power Administration has designed and manipulated the methodology in this Draft Environmental Statement to justify and expand its own technical considerations while de-emphasizing and downplaying human and socioeconomic concerns. The extensive mistakes and misrepresentations reinforce the technical aspects of powerline construction at the expense of human population.

The study has been structured to hide this bias, and the basis for conclusions has been judgemental rather than analytical. These judgemental comparisons have been made sufficiently complicated and unmeasurable as to render the document nearly impossible to understand, evaluate, or review. And what material is relevant to review is unavailable in the EIS and is not effectively and fairly summarized anywhere in the EIS. Selection of source data used or excluded from comparisons was uneven, inconsistent, unjustified, and unexplained.

Technical Bias

Route segment identification within corridors was determined primarily under direction of the siting engineer whose expertise is civil engineering rather than environmental studies. Furthermore, the decision of whether or not to identify alternate route segments for comparison purposes was under the direction of the same siting engineer. Although the engineer was supposed to consult with other team members in this segment identification, no explanation, justification, record, tables, notes, or other documentation explains this segment identification for any specific segments, segment alternatives, or lack of segment alternatives. This is verified by the March 25 information letter from George Eskridge to me, a copy

of which is included here with that reference marked(p. 3, #9). This clearly leaves the segment identification process at the direct mercy of extreme technical bias, without any possible review.

The development of further data on any particular segment is dependent on its being part of a 2-segment comparison. If no alternative segment is identified for comparison, the data collection process stops here on this segment, and most of the relevant impact data for the segment is not gathered. Some further data is gathered on the impact summary forms, but only impacts deemed "noteworthy" at the wide-open discretion of the impact summary form analyst is even mentioned here. Clearly errors of omission are not available for revue here.

Route comparison scores summaries are shown in Appendix A, but without any site specific explanation or justification of these scores. The scores are based on analysts judgements that are noted in route option ranking forms(BPA letter of 3/25/82 on p. 3 # 10). Included is an analysis of the sources of impact measures listed on the route option ranking forms. As is clear, access roads are repeated 4 times in 4 separate scoring categories, erosion potential in 3 separate scoring categories, elevation in 2, slope in 2, forestry in 2, and stream crossings in 2. However, the measure of human population is considered in only 1 scoring category. Therefore, the total impact score from high access road requirements can be as much as 4, while the score from human population can only be 1. This is clearly a technical bias at the expense of human consideration.

In the Maxville case, locating segment 132 where it is is not explained, justified, or in any way discussed. That the existence of Maxville was not addressed at all in locating segment 132 is inexcusable. That no alternative segment to segment 132 was ever identified for basic comparison and data development purposes is a clear indication of the highly manipulated methodology used to favor technical bias over human consideration.

Bias Against People

Bonneville Power Administration's methodology for counting people reflects their bias against taking people into account. But their attempt to cover up this bias is also clear in their process.

The principal measure used to count people was through Land Use. Data Items 17.1 and 17.2 show Urban/Residential and Dispersed Development. Although these two data items were all that was listed in the 3/10/82 Data Item Definitions and Sources, data items 40.1 and 40.2 were added to refine 17.1 and 17.2. 40.1 measures communities within 1 mile of the line, and 40.2 measures residences within ½ mile of the line. A community can apparently be any number of residences, or any number of residences can be counted individually. What constitutes a community is determined by BPA analysts on a case by case basis. This seems clearly to be a case where the counting methodology used is designed to be manipulated in such a way that human population impact can appear to be whatever the BPA analysts choose, regardless of actual population. To imply reduced impact, count 100 houses as one community. To imply increased impact, count 2 residences as one community. To imply increased impact, count 1 community as 100 houses. Etc.

When we requested specific information on the number of residences in Maxville, BPA did not know, but they tried to imply that they counted residences when they identified a community.(see BPA letter3/25/82, p.7 # 21.) Subsequent response from BPA established, however, that the residences had not been counted until after we requested the information (see BPA letter of 4/9/82, p. 1, # d). on March 25, 1982.

That such vital human population data is simply not known is a huge error of omission, and a serious flaw in the methodology. But the way in which this community-residence count can be manipulated at BPA's discretion raises very serious doubts about the intentions of the methodology developed, and at the very least seriously jeapordises BPA's credibility.

The extensive mistakes in the EIS regarding identification of population in Maxville illustrate the tendency of BPA to make mistakes in favor of technical bias and against human consideration. The base map used for the EIS maps shows a circle beside Maxville, and the circle is all that shows in the EIS maps. The legend for the base map identifies such circles as "populated places" (see attached legend). The urban source maps identifies Maxville as urban, but the EIS map shows Maxville only as dispersed development. However, in spite of clear evidence to the contrary in both source maps, the computer readouts of Urban and Dispersed Development show Maxville segment 132 as having 0.0 miles of urban and 0.0 miles of dispersed development land use. In each successive mistake, the tendency is to ignore people. (see computer readout.)

The Socioeconomic Report, Appendix D, is another attempt to try to show that BPA is considering people. But the report was not transmitted from Mountain West to BPA until after the Sept. route comparison workshops were over. And the interviews on which the study was based were only being conducted when the Hot Springs-Bell route comparisons were made in July. The Socioeconomic Report was justification done after the alternative comparisons had been made, a clear violation of NEPA. (CEQ rules # 1502.5) Estimated landowner density for segment 132 was rated as low(BPA letter 3/25/82, p.6, # 20) so the socioeconomic study, late as it was, was wrong. Once again, this landowner density mistake and the after-the-fact economic report indicate mistakes slanted against human and social considerations.

Flatter land is generally more valuable and more suitable for human use. Steep ground is less likely to be used by people for future development. The BPA methodology does not consider this critical socioeconomic factor; rather the methodology considers only the opposite consideration for technical construction considerations. The powerline should be placed on less valuable steeper ground not only for human use of flatter ground later, but because long-term land use costs will far outweigh short-term construction costs. Any socioeconomic consideration that does not take account of long-term land use cont impacts is seriously lacking.

Draft Statement Judgemental, Unreviewable

The corridor impact maps are developed by the analysts applying according to their judgement a matrix scheme to the resource maps. The matrix scheme in turn is an application of the analysts judgement of level of impact of various combined resources. There are no measurements of either the matrixes or their application to the maps; the entire impact rating is an unstructured judgement call of the analysts, and as such is virtually untraceable for review.

The route segment identification and segment alternative identification is totally undocumented and therefore entirely unavailable for review. Any bias, hidden motives, or unjustified weightings at this point are completely hidden.

The data base maps are of such small scale and without sections lines such that identification of known areas is extremely difficult. Although segment-by-segment computer analysis of the resource data does exist, it is not available in either the EIS or the Appendixes. Summarized route totals of these figures make analysis of any single area almost impossible. Furthermore, these segment-by-segment computer analysis data numbers of resources are not used directly for any route comparisons. The resources numbers are reviewed and interpreted by judgement calls of the analysts in the route option ranking forms in such a way that review and comment on the route comparisons is extremely difficult. Attached are attempts at summaries of route option ranking forms for comparisons of segments 130 and 131, and 133 and 134. As can be seen in these summaries, the identification of significant impacts and their corresponding scoring weights is arbitrary, random, and very unevenly weighted. And this level of review is possible only after very difficult and time-consuming study of material not readily available in the EIS or appendixes. Clearly the methodology is designed to discourage review and comment. It is also designed to make substantive comment on the EIS material almost impossible.

Public Involvement

Development of the Taft Route in the Flint Creek Valley has been a long process of blatant manipulation of the public involvement process. In spite of often repeated goals to inform landowners within ½ mile of the line, no attempt to notify affected landowners and residents on the southern route has ever been made by BPA. All BPA notification has been incidental to the process of locating a centerline and conducting corridor surveys.

The Plan for Environmental Studies as revised in April 1981 called for public workshops to be held in July of 1981 concerning route locations and route evaluations.(see attached copy of p. 11 of Plan) These workshops were never held in the Garrison-Missoula study area.

No scoping meetings were ever planned or held in the area of the southern route of the Flint Creek Valley.

When southern route landowners and residents finally became aware of the line and its proposed location, the protest was vigorous. The BPA has gone to great pains to plan and to explain their method for avoiding the Maxville issue and disregarding public comment on the southern route in the Flint Creek Valley. The "dear reviewer" letter enclosed with the EIS said our comments and the Feb 4 meeting comments would be "treated as though they were comments received on the draft EIS" even though they were made six weeks prior to publication of the EIS. In a March 25 meeting in Hall, Dan Bisenius called treatment of our comments "a grey area", and Tim Murray tried to suggest that our comments and the meeting were somehow "outside the EIS process". Now Wes Kvarsten in ~~an April~~ a very recent letter to Representative Williams insists that the Feb 4 meeting and our comments were part of the scoping process and will not be addressed in the final EIS unless resubmitted. But the scoping process is meant to define the "scope" of the study and the Feb 4 meeting and comments was not even acknowledged in the Draft EIS. And in a March 16 letter to Granite County Alliance, George Eskridge tries to justify one of these many methodological manipulations in terms of

the National Environmental Policy Act, but when challenged in our March 30 letter, he simply drops the NEPA defense in his April 9 letter. Clearly these many varying attempts at formulating methodology leave us confused about BPA's ability or intention to receive public comment. Our fear is that this obvious process manipulation and continual reinterpretation is intentional and is meant to sidestep and avoid any real consideration of our concerns. To date, BPA has given no indication and no committment to even studying alternatives in the Maxville area. Once again, the methodological manipulations of the EIS process as worked out by BPA are biased in favor of technical, self-serving, in-house interests at the expense of public and human consideration.

Department of Energy
Bonneville Power Administration
Transmission Coordination
P.O. Box 4327
Missoula, Montana 59806

In reply refer to: ETJ-21

March 25, 1982

F. Lee Tavenner, Assistant Chairman
Granite County Alliance
Star Route
Hall, Montana 59837

Dear Mr. Tavenner:

Thank you for your letter of March 22, 1982, requesting additional items you feel are needed to assist in your review of the recently issued Garrison-Spokane 500-kV Transmission Project Draft Environmental Impact Statement (EIS).

Following is a brief discussion of each item requested.

1. All of this information is in the Draft EIS and appendices. The most comprehensive list is in the reference section of the Draft EIS--Section VIII, Pages 1-18. Also appropriate footnotes have been used throughout the studies to provide proper reference. Attached is a copy of "Data Item Definitions and Sources" which explains in detail sources for data, including that presented in Appendix C--Map Volume.

2. A number of air photo products have been used in preparing the Draft EIS and are available for your review at our Missoula office. Copies of the air photos can also be purchased. (Color air photos, approximately 1 inch = 2,000 feet scale, cost $3.50 per photo to reproduce 49 photos which cover the segments you mentioned.) Additionally, map and air photo information will be available for review at open house sessions preceding each public comment meeting.

3. We are providing: Measuring the Visibility of High Voltage Transmission Lines, Jones and Jones, 1978; and Visual Impact of High Voltage Transmission Facilities in Northern Idaho and Northwestern Montana (with maps at 1:125,000 scale), Jones and Jones, 1976.

4. The maps referred to are large scale black and white air photos used by the Soil Conservation Service to define soil mapping units. These mapping units are mapped directly onto the photos based on field work done by SCS soil scientists. Certain soil units have been determined to be farmland that is prime, unique or of statewide importance, as listed on separate files at the SCS offices. For Granite County, BPA personnel visited the SCS District Office at Philipsburg and, using the

actual field photo maps, mapped prime and statewide important soil units onto the study area base map. We did not acquire copies of this information. Any questions regarding use or availability of the SCS photo maps or other interpretive information can be answered by Troy Buchanan, Acting District Conservation Officer, in Philipsburg at 859-3291.

5. The Montana Statewide Cooperative Land Use maps are moderate scale (1:100,000) land use/land cover maps, by county, published by and available from the Montana Department of Community Affairs in Helena for a nominal fee ($1 for the first map and $.25 for additional maps).

6. Provided to you at no cost.

7. We are providing you computer printouts which indicate the amounts of each mapped resource data item encountered, by segment, in both miles and acres for the five segments you listed.

   No separate figures were compiled on "impact potential." The information presented in Table 4.3 (Potential Impacts) and Table 2.2 (Data Summary) are merely different aggregations of the mapped resource data measurements on the printouts discussed above. These printouts display the resource information by segment; Table 4.3 aggregates the information by groups of segments between intermediate substations for all feasible combinations; and Table 2.2 summarizes the same information in terms of the top-ranked route(s) for each plan-of-service.

   The following table should provide the requested segment breakdown of technical data from Table 2.1:

Segment	# Circuits	Length (Miles)	Right-of-Way (All new non-parallel)	Access Requirements HML	Substation Requirements	Cost (Transmission)
130	Double Circuit	14.5	14.5	See Printout Provided With Item #18	No substation associated directly with these segments. Garrison Substation to the east.	$12,324,241
131	Double Circuit	14.8	14.8			$12,576,128
132	Double Circuit	1.5	1.5			$ 1,132,075
133	Double Circuit	16.4	16.4			$13,769,811
134	Double Circuit	16.8	16.8			$14,105,660

8. The following sources of comments and analysis of the comments are available. Verbatim transcripts were taken of all scoping meetings held in Spring 1981. This information is available for your review in our Missoula office or you may purchase copies of each transcript from Cavanaugh, Martin & Associates, 199 West Pine Street, Missoula, Montana ($.50 per page).

   The other sources we have provided to you at no charge (attached). These are summaries that our staff prepared based on study and review of the transcripts and comment letters. They are:

   1. A basic outline of the comment analysis method used;

   2. A statistical outline of comments derived from the meeting transcripts and comment letters showing the frequency of comment by area;

   3. Summaries of each comment from the meeting transcripts coded by town and page;

   4. Summaries of comments from the comment letters coded by author;

   5. Copy of the August 1981 mailer containing the summaries of all issues derived from the comments.

9. "Review comments" refers to those comments gathered at the scoping meetings in March 1982 which pertain to the corridors presented for public review at that time. Comments about specific corridor locations that addressed specific problems encountered within the corridor were considered in locating alternative routes. The information provided under Item #8 above would contain any specific comments considered.

The process used to locate the referenced segments involved synthesizing a wide variety of information. It included intensive study of all data and impact maps (Appendix C); field review and study; evaluation and interpretation of air photos (Item #2); and discussion and review with agencies and the public (EIS review process). There is no specific "product" that documents this synthesizing process.

10. We are providing copies of route option ranking forms used to compare segments 130/131 and 133/134. The nature of the comparisons is detailed further in Appendix A, Attachment 3. These particular route comparisons are summarized in Figure 17 and Figure 18 as Local Routing Alternatives 10 and 11 respectively in this attachment. The tables in these figures contain the final ranking for each of 12 resource topics considered in the comparison. The forms we are providing document the factors considered in making the rankings. Each resource analyst filled out a form for each Local Routing Alternative and summarized his rationale for the ranking.

11. Provided. (Also see Item #1)

12. There is no subcontractor associated with this activity along these segments. BPA has contacted people along each segment over the past 8-10 months. The specific contacts and nature of their discussions are not available at this time. BPA must obtain written approval of each party concerned prior to release of this information. This must be done to fully protect the rights of all parties involved.

13. The May 12, 1981, flyer is provided.

14. The May 12 announcement was sent to all those on the mailing list that was current on that date. This information is available and may be obtained for the cost of reproducing the list.

15. The list of newspapers and dates of publication of the Drummond meeting notices is provided.

16. See Item #12.

17. The bar and pie charts used to illustrate how the three plans compare for the evaluation criteria were based primarily on the resource data item information including that provided under Item #7. These illustrations are merely graphic representations of route data shown in Table 2.2.

Representative data items were chosen for each criterion and graphed. These are listed either in the boxes to the left of each graph or in the title and further explained in the text.

Criterion	Representative Data Items	Source
1. Residential, Inhabited	Developments, communities within ½-1 mile; residences within ½ mile	Provided as item #21.
2. Agricultural Land	18.1 Irrigated Agriculture 18.2 Non-irrigated Agriculture 17.5 Range Land	On printouts (Item #7) as data item number as shown opposite. Also see Data Item Definitions (Item #11).
3. Intensively Managed Forest Land	Intensively Managed Forest Land	Secondary analysis product by forestry analyst. Map on file in Portland. Segment data as follows:

Segment	Miles Intensively Managed Forest
130	5.2

Criterion	Representative Data Items	Source
Segment	Miles Intensively Managed Forest	
131	4.4	
132	0	
133	4.4	
134	7.6	
4. Lives/Lifestyles	25.1 + 25.2 Public Land 25.3 Indian Reservation 25.4 Private Land	On printouts (Item #7) as data item number as shown opposite. Also see Item #11.
5. Scenic/Esthetic	29.1 + 29.2 Visual Quality 30.3 Visual Compatibility 31.1 Viewer Exposure 32.1 Visual Sensitivity	On printouts (Item #7) as data item number as shown opposite. Lower graph was a composite wherein maps (See Appendix C) of 29.1/29.2 and 30.3 were combined to yield "Landscape Alteration"; and 31.1 and 32.1 were combined to produce "Viewer Characteristics"
6. Cultural Resources	High Site Potential	Secondary analysis product by cultural resource analysts. Map on file in Portland. Segments 132 and 134 each cross ½ mile of land where potential for occurrence of cultural site is high.
7. Natural Resources	8.2 Municipal (Watersheds) 10.1 Big Game Sensitive Habitat 12.1 Bald Eagle Wintering Areas 17.4 Forest Land Problem Soils High Access Requirements	On printouts (Item #7) as data item number as shown opposite. Secondary analysis product by geology/soils analyst. Map on file in Portland. Segment 130 crosses .6 mile problem soils. As provided in table (Item #7) and for Item 18.

Criterion	Representative Data Items	Source
8. Environmentally Sensitive Areas	Environmentally sensitive areas shown on EIS Fig. 2.5 as crossed by routes.	See EIS Fig. 2.5. Text in Appendix A explains how these areas were determined.
9. Uses Existing Corridor	Miles of route parallel to existing corridor	Technical considerations under "Right-of-Way" shown on table 2.2 in EIS and as provided in table (Item #7).
10. Future Facilities	Corridor Constraint areas shown on EIS Fig. 2.5 as crossed by routes.	See EIS Fig. 2.5. Text in Appendix A explains how the areas were determined.

18. This data is provided as part of the table under Item #7. Technical considerations and levels of access requirements are defined in footnote 7 of EIS Table 2.1. To elaborate on these categories, the following amounts of off-right-of-way access were generally correlated to these categories:

    Low - 1 or fewer miles
    Moderate - 1 to 4 miles
    High - More than 4 miles

    The category "low" is by no means confined to situations where existing lines are paralleled, but often access requirements are low in such cases. Other situations could include areas where numerous forest clearing access roads have been built.

19. A copy of the CEQ Regulations is provided.

20. Estimated landowner density is as follows:

Segment	High	Moderate	Low
130	-	-	14.5
131	-	-	14.8
~~132~~	-	-	1.5
133	-	-	16.4
134	-	-	16.8

7

21. The estimate of number of individual residences within ½ mile of all segments, as well as the number of communities within 1½ miles, was made by review of the 1 to 2,000" color aerial photos flown in spring/ summer 1981. Individual buildings, small groups of buildings and obvious communities were counted to either side of the routes within the above distances without regard to possible topographic or vegetative screening. The results were not field checked. For segment 132, 14 residences were counted, and treated as a single community.

I hope this information and data provided will assist you in your review. Please contact me if you wish to obtain those items for which there is a charge.

Thank you for your interest in this project.

Sincerely,

George E. Eskridge
Projects Information Officer

Enclosures

Department of Energy
Bonneville Power Administration
Transmission Coordination
P.O. Box 4327
Missoula, Montana 59806

In reply refer to: EVHE

April 9, 1982

P. Lee Tavenner, Assistant Chairman
Granite County Alliance
Star Route
Hall, Montana 59837

Dear Mr. Tavenner:

Thank you for letter of March 29, 1982, requesting additional information to assist your review of the Garrison-Spokane 500-kV Transmission Project Draft Environmental Impact Statement.

Following is a brief description of each item provided:

a. Provided as requested
b. Provided as requested
c. Provided as requested
d. As Jay Marcotte indicated to you on March 26, data items 40.1 and 40.2 were identified to refine items 17.1 and 17.2. It was decided to map this information from the color 1" = 2000' air photos (flown during summer 1981) to provide additional input to the urban/residential analysis of the routes. This information was collected and mapped in August 1981, prior to the September 14-16 route comparison workshop. As to the number of residences along segment 132, I am unable to say whether an actual figure had ever been arrived at prior to this March.

As Jay indicated to you March 26, the residences in the Maxville area were mapped as a community because they occur more as clusters than as individual residences. After being identified as clusters or communities, communities were not further differentiated on the basis of size or number of houses.

The specific figure of 14 residences was arrived at on March 25, 1982, in response to item number 21 of your March 22 letter. The study team landscape architect, using the 1981 color airphotos, counted all dwellings in a 1-square mile area centered on the Maxville crossing. As indicated in our March 25 response, he counted 14 residences.

e. Provided as requested.

f/g The entries in the Data Item Definitions and Sources were generalized references which did not necessarily list, in detail, all the specific sources used to produce a particular map. Such generalized listings typically occurred for data items which were based in large part on USFS and BLM sources. In such cases, rather than listing each specific resource map used, all references were generalized as "Unpublished resource maps". During your March 26 meeting with Jay Marcotte, he offered to try and give you a more specific list of these resource maps for data items that you deemed important for your review. For the data items you mentioned in your March 29 letter, no "more specific" sources were used other than what is shown on the list. However, reference to our 1':2000" color air photos was inadvertently omitted from the Data Item Sources. These were the major sources for the land use data base. As Jay indicated to you on March 26, the major sources for Agricultural Productivity (note: this refers to Prime, Unique, or Statewide important lands and nothing else) were the maps or photo-maps available in each SCS District Office. The actual use of land for agricultural purposes was part of the Land Use/Land Cover data base and was compiled using aerial photography along with the sources listed under data item 18.0 on page 10.

h. We are providing two copies of the project mailing list. The first is the earliest dated list we have record of. It is dated June 1981 and basically contains the people to whom notices of the May 1981 Scoping Meeting were sent. The second list is our current mailing list, dated March 1982.

i. Provided as requested.

j. Access roads requirements were estimated by BPA's right-of-way engineering group based on helicopter reconnaissance, air photo interpretation, and on the ground field checking. Access requirements were divided into three groups (High, Moderate and Low) as defined in our March 26 response. These were averaged for each segment and entered into the data file. Each team analyst used the data printouts, including the one on access, in performing his route option rankings. In the case of the Socioeconomic study, the analyst multiplied an average mile figure for each access class by the number of miles in that category to arrive at an estimate of the total number of miles of access required. For instance, segment 141 is 7.7 miles long and would have high access requirements. Therefore, 7.7 X 4 = 30.8 miles of access roads. The "4" above is the average miles of off-right-of-way access required per each line mile under the "High" Category.

k. Per telecon April 2, 1982, you have already obtained a copy of this.

l. Copies of these maps have been sent to our Missoula office where you may review them.

Additional concern: The individual residents BPA met with on July 7, 1981 whose names were requested in your March 22 letter have given permission for their names to be provided to the Granite County Alliance. They are:

Evelena Anderson
Stuart Hauptman
Mrs. Albert Boomer
Laura Ledbetter
Gordon Foster
Elmer Lachenmayer
Ray Lucier

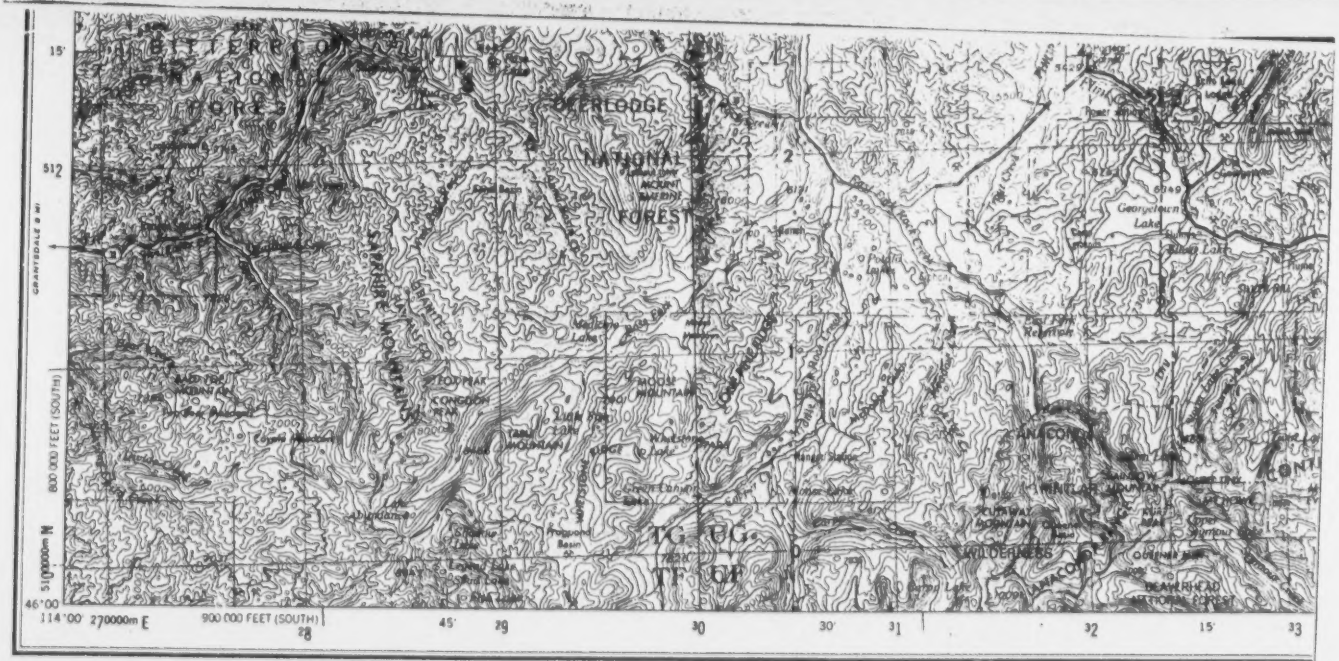
This information supplements that which we provided earlier. I trust that it will enhance your review.

Again, thank you for your interest in this project

Sincerely,

Jay T. Marcotte for George Eskridge

George Eskridge
Projects information Officer


BITTERROOT
NATIONAL
FOREST
OVERLODGE
NATIONAL
FOREST
Georgetown
Lake
Flint
Reservoir
Flint
Creek
Range
Rock
Creek
Canyon
Creek
Lake
Lake
Lake

ROUTE NAME	SEGMENTS	ROUTE LENGTH	DATA ITEM 16.1	17.1	17.2	17.3	17.4	17.5	17.6	17
130	130	- 14.5 -	0.0	0.0	0.0	0.0	12.0	2.5	0.0	
131	131	- 14.8 -	0.0	0.0	0.0	0.0	13.7	1.1	0.0	
132	132	- 1.5 -	0.0	0.0	0.0	.1	.8	.6	0.0	
133	133	- 16.4 -	0.0	0.0	0.0	.3	6.4	8.9	.8	
134	134	- 15.8 -	0.0	0.0	0.0	.2	13.0	3.0	0.0	

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proposal(s) in one of the following ways:

(1) Geographically, including actions occurring in the same general location, such as body of water, region, or metropolitan area.

(2) Generically, including actions which have relevant similarities, such as common timing, impacts, alternatives, methods of implementation, media, or subject matter.

(3) By stage of technological development including federal or federally assisted research, development or demonstration programs for new technologies which, if applied, could significantly affect the quality of the human environment. Statements shall be prepared on such programs and shall be available before the program has reached a stage of investment or commitment to implementation likely to determine subsequent development or restrict later alternatives.

(d) Agencies shall as appropriate employ scoping (§ 1501.7), tiering (§ 1502.20), and other methods listed in §§ 1500.4 and 1500.5 to relate broad and narrow actions and to avoid duplication and delay.

§ 1502.5 Timing.

An agency shall commence preparation of an environmental impact statement as close as possible to the time the agency is developing or is presented with a proposal (§ 1508.23) so that preparation can be completed in time for the final statement to be included in any recommendation or report on the proposal. The statement shall be prepared early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made (§§ 1500.2(c), 1501.2, and 1502.2). For instance:

(a) For projects directly undertaken by Federal agencies the environmental impact statement shall be prepared at the feasibility analysis (go-no go) stage and may be supplemented at a later stage if necessary.

(b) For applications to the agency appropriate environmental assessments or statements shall be commenced no later than immediately after the application is received. Federal agencies are encouraged to begin preparation of such assessments or statements earlier, preferably jointly with applicable State or local agencies.

(c) For adjudication, the final environmental impact statement shall normally precede the final staff recommendation and that portion of the public hearing related to the impact study. In appropriate circumstances the statement may follow preliminary hearings designed to gather information for use in the statements.

(d) For informal rulemaking the draft environmental impact statement shall normally accompany the proposed rule.

§ 1502.6 Interdisciplinary preparation.

Environmental impact statements shall be prepared using an inter-disciplinary approach which will insure the integrated use of the natural and social sciences and the environmental design arts (section 102(2)(A) of the Act). The disciplines of the preparers shall be appropriate to the scope and issues identified in the scoping process (§ 1501.7).

§ 1502.7 Page limits.

The text of final environmental impact statements (e.g., paragraphs (d) through (g) of § 1502.10) shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages.

§ 1502.8 Writing.

Environmental impact statements shall be written in plain language and may use appropriate graphics so that decisionmakers and the public can readily understand them. Agencies should employ writers of clear prose or editors to write, review, or edit statements, which will be based upon the analysis and supporting data from the natural and social sciences and the environmental design arts.

§ 1502.9 Draft, final, and supplemental statements.

Except for proposals for legislation as provided in § 1506.8 environmen-

2.	Conduct workshops 1/ to inform public about route locations and solicit comments on issues and route evaluation criteria Relate issues to routes.	Project Coordinators Spokane Area Office Missoula Office USFS, BLM	Mar 1980 (July 1981)
3.	Review and assess results of workshops. 2/	Team Leader Missoula Office	Mar-Apr 1980 (Aug 1981)
4.	Issue Newsletter No. 4.	Missoula Office	(June 1981)
5.	Develop a mailing list of individuals and groups that might want to be informed about and involved with the project. Expand this list with other agency advice.	Team Leader Missoula Office USFS, BLM	Dec 1979 (Apr 1981)
6.	Contact with affected landowners, organizations, and local agenices.	Missoula Office	As Requested

Expected Results

The results of the workshops will help finalize issues, plans of service, route locations and evaluation criteria that will be used in the next phase.

PHASE IV - Impact Assessment

Objective

Continue to keep the public informed of project status.

Methods

	Action	Responsibility	Due Date
1.	Distribute a mailer informing the public of the earlier workshop results.	Project Coordinator Missoula Office	Sep 1980 (Aug 1981)

1/ Workshop will be held at convenient locations throughout the study area to provide opportunities for public participation.

2/ Several workshop participants requested that BPA notify all potentially affected property owners. See activities added to Phases V and VI.

STATEMENT TO BE PRESENTED AT BPA PUBLIC MEETING
APRIL 22, 1982 AT PHILIPSBURG

My name is Adele Furby and I am chairman of the Granite County Alliance. On behalf of the membership of the Alliance I would like to make the following statement.

On February 3rd, 1982, the Granite County Alliance passed a resolution which advocated that the BPA locate their proposed centerline on the Gold Creek-to-Harvey Cabin segment of the Taft Route within a corridor about two miles south of Maxville. This corridor we call corridor "E". We believe that a route through this corridor would be preferable for the following reasons :

1) It would avoid all residences. Any route through this corridor would be more than one-half mile from any permanent homes, whereas the Taft route comes closer than one-half mile from 18 permanent residences in the Maxville area.

2) It would avoid more private land. A route through corridor E would cross less than one mile of private land, whereas the BPA's "environmentally preferred" route on segments 130, 132, and 134, inclusive, would cross over eleven miles of private land.

3) A route through corridor E would avoid seven more miles of private agricultural land than the Taft route.

When one evaluates routes through corridor "E" using the analysis maps in the draft Environmental Impact Statement, the following information can be found which further supports our contention that corridor E is a more desireable area for the line location than the Taft route. The following analysis compares approximate mileages between Corridor E and the Taft route. In this analysis, the Taft route segment studied begins where segments 131 and 130 diverge, follows segment 131 westerly, includes segment 132, and includes the eastern segment of segment 134, ending where segment 134 intersects with corridor E. The map accompanying this statement clearly delineates the segments of the Taft route used in this comparison. In this analysis, the segment called corridor E also begins where segments 130 and 131 diverge. It follows segment 131 westerly until it converges with the eastern edge of corridor E. It then follows south and west through corridor E, and ends where Corridor E meets segment 134. This is also shown on the enclosed map. Therefore, the Taft route section studied and the E corridor studied begin and end at the same locations. Although, as has been mentioned by other spokesmen for the Granite County Alliance, we feel that the maps contained in the Draft EIS are not completely accurate, the evidence presented in this analysis is all taken directly from these BPA maps.

1) The Hydrology impact would be significantly decreased by using Corridor E. Corridor E crosses about 7 miles of impact area, whereas the Taft route crosses about 10 miles of impact area.

2) Wildlife impact is greatly reduced by using corridor E. Corridor E would create a low impact on about 16 miles and a moderate impact on less than one-half mile, whereas the Taft route would have a low impact on about 21 miles and and a moderate impact on more than two miles.

3) Forestry impact would be reduced by using corridor E. Corridor E crosses about 12 miles of low impact, and about 10 miles of moderate impact land. The Taft route crosses about 8½ miles of low impact land, but about 12 miles of moderate impact land.

4) Recreation impact would also be reduced by using Corridor E. Corridor E passes over no areas of moderate impact, whereas the Taft route crosses over two identified areas of moderate recreational impact.

5) Areas where land use constraints would be crossed are cut by more than half by using corridor E instead of the Taft route. Corridor E passes over slightly more than one mile of impactd area, whereas the Taft route passes over slightly under three miles of land use constraints areas.

6) Land acquisition cost would be greatly decreased by utilization of Corridor E, as the Taft route crosses over more than seven miles more of land classified as having moderate acquisition cost than does corridor E.

7) The amount of land with moderate erosion susceptibility would be cut in half by using corridor E. Three miles of land with moderate erosion susceptibility would be crossed in Corridor E as opposed to 6 miles crossed in the Taft route. The amount with high susceptibility is exactly the same on both routes.

8) The land crossed with geologic mass movement potential would be reduced in corridor E from 3 miles on the Taft route to 2 miles in Corridor E.

9) Less land classified as Big Game Sensitive Habitat would be crossed if Corridor E were used. Seventeen miles of big game sensitive habitat would by crossed on corridor E as opposed to over 21 miles on the Taft route.

10) The corridor E also crosses fewer areas identified as cultural resources. The Taft route crosses two prehistoric sites, while E crosses none. The Taft route crosses three historic sites, whereas E crosses two.

In summary, it can be seen that Corridor E is superior to the Taft route from the standpoint of: Hydrodogy, wildlife, land use constraints, acquisition costs, mass movement potential, big game sensitivity, forestry, erosion susceptibility, recreation, and cultural resources. These above named factors are, of course, important considerations. Add to these factors the one, main, overwhelming advantage of Corridor E--that is that it avoids the area where there is a greater concentration of people and their homes than on any other segment of the Taft

Route between Garrison and Taft with the exception of Miller Creek, and the evidence makes it clear. There is no possible way that the BPA can reasonably maintain that the Taft route through Maxville is "environmentally preferable" to the Corridor E suggested by the Granite County Alliance.

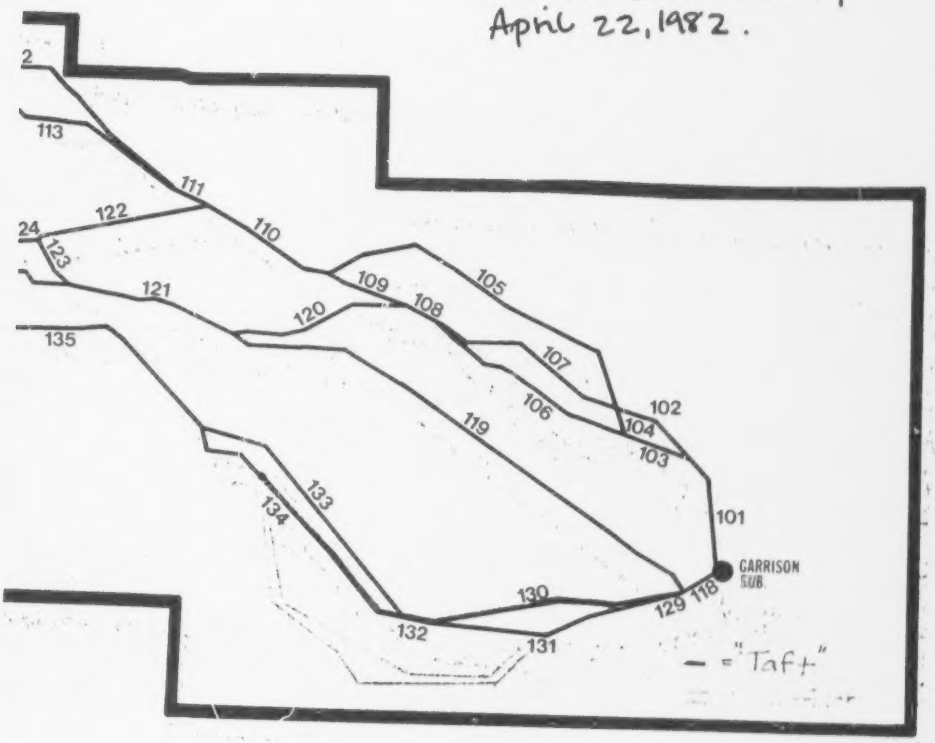
Please note. The attached Route Comparisons table summarizes in chart form the route comparison data given on page two of this statement.

Adele Jury

gment

ute alternatives (combination of segments) would proposed transmission line facilities between Garrison, ane, Washington.

Map illustrates the 2 routes compared in Granite County Alliance statement of April 22, 1982.



ROUTE COMPARISONS*

	"E"	Taft	"E"	Taft	"E"	Taft
	Low		Moderate		High	
Hydrology	7mi.	10 mi.				
Wildlife	<16mi.	21 mi.	<½mi.	>2 mi.		
Land Use Constraints	>1mi	<3mi.				
Acquisition Costs			<3mi.	>10mi.		
Mass Movement Potential	2mi.	3mi.				
Big Game Sensitivity	17mi.	>21mi.				
Forestry	12mi.	8½mi.	10mi.	12 mi.		
Erosion Susceptibility			3 mi.	6 mi.		
Recreation			0	2 sites		
Prehistoric Sites			0	2 sites		
Historic Sites			2	3 sites		
	"E"	Taft	"E"	Taft	"E"	Taft

*Comparisons are between:

"Taft"--begins where segments 131 and 130 diverge, follows segment 131 westerly, includes segment 132, and 134 and ends where Corridor E intersects segment 134

"E"--Begins where segments 130 and 131 diverge, follows segment 131 westerly until it heads south through Corridor E, ends where Corridor E meets segment 134

Statement for BPA Hearing, April 22, 1982

My name is Lee Tavenner. I would like to present the following statement on behalf of the Granite County Alliance.

NEED, NO ACTION ALTERNATIVE

The power of condemnation, the National Environmental Policy Act, the Montana Facility Siting Act, and reason all require that the issue of NEED be addressed fully in this EIS. Not only must need be established, but according to NEPA the overall environmental impacts of meeting whatever Need is established must be weighed, evaluated, and compared to the overall environmental impacts of NO ACTION. This draft EIS fails miserably in both of these essential tasks.

The Need issue as addressed in the EIS is based on generation rather than load. By this logic, if Colstrip 3 and 4 were twice as big, this would establish a need for twice as much power, regardless of actual load. Such an approach is a self-serving, utility-oriented analysis of "need" on the part of BPA, and it is a corruption of the general "public good" concept of need.

All actual load projections are smaller now than they have been in the recent past. From the approximate 5% growth rate for Northwest Power mentioned in the Montana Certificate of Need for Colstrip, estimated growth rate has dwindled to about 1.6% in the April 5, 1982 BPA load forecast. Forecasts for 1985 loads in the Northwest have dropped about 3500 MW just since 1980, or more than twice the proposed output of Colstrip 3 and 4. The deficits and shortages predicted in the very early Colstrip documents have never materialized. In 1981 Montana Power sold $ 70 million worth of surplus power. According to the 1981 Montana Power Report to Shareholders, Montana Power in 1981 had 338 MW more capability than peak load (28%), and 643 MW more capacity than average load(72%). This is without Colstrip 3 & 4. With BPA's estimated growth rate of 1.6%, and with the planned

hydro expansion at Ryan, Hauser, Thompson Falls, and Kerr Dams, Montana Power capability in 1990 of 1667 MW will exceed 1380 MW peak load by 287 MW(20%), and will exceed 1026 MW average load by 641 MW(62%). This is without power from either Colstrip 3 or 4. (see attached stockholder report summary).

None of these recent load projections are discussed or used in the EIS in relationship to need for the powerline from Garrison to Spokane. Nor have the projected dates for this need been changed or discussed. The surplus sales by Montam Power is not discussed in the EIS. Nor is the proposed delay of construction of Resource 89, now Salem, discussed in the EIS. The EIS has not accounted for the closure of the Anaconda smelter, and the reduced need for power from the Bunker Hill closure has been very carefully sidestepped.

A load forecast is included in the EIS, but it is not discussed in relation to need for the power or the powerline. Resources available is not covered at all, so existence of need cannot be reviewed or verified except by reference to material not contained or referred to in the EIS. Montana Power hydro expansion plans are not considered or discussed.

Implications of the Woops nuclear plant closures and slowdowns is not considered. Discussion of the one-utility concept and its relationship to choice of plants to be stopped or slowed down is not discussed. The relationship between already certified need for Woops along with Woops closures partly for lack of need is never discussed in the EIS.

The 73% BPA price increase and its effect on conservation is not considered. The doubling of Montana Power rates if and when Colstrip 3 and 4 are energized and the consequent conservation effect is completely ignored.

In summary, the issue of need and the numerous current conditions that have had a profound effect on need or lack of need for this powerline have been totally ignored in this EIS.

Nor has the NO ACTION alternative begin given its due. Clearly, unless Need is established, NO ACTION is the only environmentally and economically preferred alternative.

Even if need of some level can be established, it remains a major responsibility of the EIS to measure and compare

the environmental impacts and consequences of not meeting the need with the environmental impacts and consequences of building the line. If the impact of the line is greater than the impact of not meeting the need, then not meeting the need or NO ACTION is still the environmentally preferred alternative, even though some level of need might have been established.

In turn, the NO ACTION consequences and impacts must be identified and measured in comparison with the action alternatives in such a way that the NO ACTION alternative can be considered by the decisionmakers as a real possibility, even though it may not be shown to be the environmentally preferred alternative.

Clearly BPA's handling of the NO ACTION alternative has not been a good faith consideration or study of the alternative.

The aluminum industry is a potential large (30%) reserve that should be a major factor in considering need, and in considering risk. Because forecasts have traditionally been based on 35-year low water years, the potential of the aluminum reserve for once-in-thirty-five year contingencies should be a major factor. No discussion of the impact of aluminum curtailment in low water years as compared to the impact of the incredible debt load of overbuilding thermal plants is given in the EIS.

BPA occassionaly refers to what they call congressional "mandate" as settling the need issue. The congressional permission itself refers to "such amounts as may be necessary...." Without establishing need, BPA has no congressional authorization.

BPA has attempted to segment this line into separate units with separate EIS's. If they segment the EIS consideration, then they must segment the need issue and establish it completely independently. And by NEPA they must independently consider NO ACTION and the possibility of a real go/no-go decision currently with the EIS study timetable. (see attached CEQ #1502.5)

1981 at a glance

	1981 (000)	1980 (000)	Inc. (Dec.)	Five Years Ago 1976 (000)
Utility Operating Revenues	$ 382,486	$ 342,459	6%	$ 170,165
Utility Operating Income	66,390	53,133	25%	39,835
Income Before Nonutility Operations	42,735	24,125	77%	18,362
Nonutility Sales	127,753	107,933	18%	52,992
Income from Non-utility Operations	19,311	19,249	0.3%	8,722
Consolidated Net Income	62,046	43,374	43%	27,084
Net Income Per Share of Common Stock	$ 4.04	$ 3.27	24%	$ 2.53
Dividends Declared Per Share of Common Stock	$ 2.33	$ 2.15	8%	$ 1.80
Sales of Electricity (MKwh)	7,797,133	7,730,941	1%	6,741,668
System Capability (Kw)	1,533,650	1,468,600	4%	1,293,600
Peak Load (Kw)	1,196,000	1,246,000	(4%)	999,000
Sales of Natural Gas (Mcf)	40,897,875	49,807,851	(18%)	50,014,291

COVER PHOTO:

A contract drilling crew completes a new development well in a nonutility field operated by NARCO near Sweetgrass, Montana.

Granite County Alliance Statement by Stewart Hauptman

My name is Stewart Hauptman and I am a member of the Granite County Alliance. I am making this statement on behalf of the Alliance membership. Mitigations

Aside from our desire to make sure that the line is located in the best possible place for all concerned, as an Alliance, we are also dedicated to insuring that the BPA utilize all possible mitigation methods to minimize impact on private landowners and other land users. Because we are aware of the fact that the line will be here for at least 50 years, and that we will be affected on a daily basis by its presence since we live and work here, we must insure that not only location, but also construction methods and maintenance methods be the least detrimental to the land users as well as the land owners. Furthermore, adequate compensation must be made to affected landowners.

Location Considerations

Permission for surveying and for right of way clearing must be obtained from affected land owners in writing, and notice of entry given on each occasion.

Tower locations must be established in cooperation with affected landowners and land users

Radio and TV reception must not be adversely affected.

Construction Considerations

Construction methods must minimize impacts on private land use. BPA must cooperate with landowners in road location. For example, on ranching and agricultural land roads should be located so as to benefit the agricultural operations whenever possible. In timber production areas they must be located so as to improve logging and timber management operations. Roads must also be located so as to minimize erosion and to be of benefit for erosion control purposes whenever possible

Helecopters should be used for tower location in areas where extensive roading would be damaging. The draft EIS mentions several areas where helecopter siting is being

considered, such as Rock Creek. Our area must receive the same consideration.

Since permanent access is not required across prime farm land according to the EIS, there is no reason why it should be required across other private land.

Gates, cattleguards, and fences should be established in cooperation with landowners and land users.

Maintenance Considerations

Roads, gates, cattleguards, fences, and all other structures established in connection with construction of the line must be maintained by BPA.

All forms of weed and brush control must be done in cooperation with area landowners and land users, and prior approval must be secured from land users on each occasion when these operations are performed.

BPA must take the responsibility to take whatever measures are necessary to maintain radio and TV reception at pre-construction quality.

Compensation Considerations

Adequate compensation for easements must be established on other than a one-time, per-acre payment basis. Property devaluation, loss of agricultural productivity, loss of flexibility of mining operations, and aesthetic impacts are examples of other factors which must be considered in determining adequate compensation. The expense of establishing, and maintaining roads, gates, cattleguards, fences, and all other structures necessary to maintain current land use must be borne by BPA.

All of the above stated and related mitigations must be guaranteed in writing for all affected landowners and land users before members of the Granite County Alliance will sign any contracts.

And finally, until there is an actual and proven need for any duplication or enlargement of the present power transmisssion system, the above listed mitigations are not relevant or necessary.

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Senator MELCHER. Thank you. I think perhaps that as we go to each group it would be better for the record if we just ask any questions we have now rather than going through all of the testimony. It's a little bit confusing to follow through. So, as each of you testify, I'll give my question right afterward.

Orville Daniels mentioned this morning that Maxville meets the end of the observations, I hate to say that, but does it fit the criteria you have established for the Maxville?

Mr. TAVENNER. I'm not exactly sure when you say that, what alternative you're speaking of because the situation, as it exists now, this small dotted line which is north of the Maxville area, as we understand it, was proposed by the Forest Service and it's a line that is almost entirely, if not entirely on private land, and the main problem that we have dealing with the Forest Service in our area is that from their point of view, any line that it crosses less Forest Service land is by definition, more environmentally preferable. This is maintained because they don't have any authority to make any judgments as to the environmental effects on or about private land. Therefore, any time we suggest a line that crosses more Federal land and less private land, they don't like it and as we understand now, this dotted line north of town is one that BPA has developed to their response and request and it is definitely no better than the line we have now and possibly worse. It's crossing more agricultural lands, it's going across terrain. It's going the wrong direction.

Senator MELCHER. The goal of the Forest Service has been to define routes off of this private land. What particular contact in the Forest Service views it differently?

Ms. FURBY. Well, we did have quite a few meetings this spring with various Forest Service people and discussed quite a few alternatives, but from what we can determine from speaking with them, of course they can speak for themselves, but there are no overwhelming environmental problems with any route south of Maxville, but never across them, because they cross more public land, and it's the quote unquote cumulative impact we don't like. We don't like it either. We don't like it on private land either. They say we are unqualified to deal with impacts on private land. Therefore, naturally, routes they like are all the ones that don't cross their land.

Senator MELCHER. I'm surprised to hear that because we already established, going to the Boulder area, that the goal was to get off of private land onto Federal land. All that was our understanding. We did finally have a meeting with the IDT team, I think it was in late May, and they came down and talked with us, and not too long after that I got a call from Charlie Miller and he said he wanted to let me know that they had come down with some of the Bonneville people, looked aronud in our area and he wanted to let me know that they were encouraging Bonneville to develop a route north of Maxville, all the land north of Maxville is private.

Senator MELCHER. Well, I'll encourage Charlie Miller to go onto forest land.

Ms. FURBY. I appreciate that.

Senator MELCHER. That is the goal and it remains a goal. If anything is going to be approved of this, it's got to meet those goals. I don't know how to get across to some of these people. And you've got to cross that road there. There must be some private land there.

Ms. FURBY. The difference, the current Bonneville route crosses over 10 miles of private land. The corridor that we are proposing would necessitate crossing between less than one-half up to 2 miles of private land because there is land on the Flint Creek crossing and on the Boulder Creek crossing that is private, but all the rest is Forest Service land.

Senator MELCHER. Is that southerly route there that's drawn in, would that be what you're speaking of?

Ms. FURBY. Yes, very roughly so.

Senator MELCHER. Is that private land agricultural land?

Ms. FURBY. Most of it, yes, the large majority of it is. It is mainly ranch land, it is some irrigated grain and hay land and a lot of pasture land. You're talking about this current route that they want or you're talking about the one south? Yeah, that land is, the priavte land that would be crossed at Flint Creek itself is summer pasture cattle grazing.

Senator MELCHER. It's not farm.

Ms. FURBY. No.

Senator MELCHER. That is generally what you recommend.

Mr. OLENSLAGER. Yes, south of Maxville.

Senator MELCHER. What forest is that in?

Mr. OLENSLAGER. That's the Deer Lodge National Forest.

Senator MELCHER. I peersonally agree with your testimony. I don't know how they could pick out a route across Maxville. It never made any sense to me. I don't know how many people live in Maxville. How many do?

Mr. OLENSLAGER. Well, we've got about 50 people living within a half mile of that proposed line whereas our route would have zero people living within a half mile.

Senator MELCHER. That's what we want.

Mr. OLENSLAGER. You mentioned Corridor E and pretty much that line south there is Corridor E.

Mr. OLENSLAGER. Right, roughly, yes.

Senator MELCHER. I'm also led to believe, and you can tell me, I'm sure, there is some reason to think that's going to grow beyond what it is.

Mr. OLENSLAGER. Absolutely. Maxville is a slatted town site and there are approximately 220 platted lots in Maxville already. The thing about is, it is a very valuable piece of real estate because it is all platted and at any time a developer could come in there and sell those, you could have 2,222 homes there next year at Maxville the way it's platted out. It's bound to happen. We're only 65 miles from Missoula. It's going to happen very soon.

Senator MELCHER. You're not too far from Anaconda or Butte?

Mr. OLENSLAGER. That's right, we're really right in the middle between Helena, Butte, Missoula, and Anaconda.

Senator MELCHER. I'm very much amazed that this hasn't been straightened out. We've been aware of it for months.

Mr. OLENSLAGER. Senator Melcher, I'll tell you, the last couple of months, we have just been overwhelmed. Things seemed to be going from bad to worse down there.

Senator MELCHER. Well, I've always been of the opinion that if the line had to be rerouted at Maxville, there wasn't much reason to argue about it and it should be on national forest lands and have been aware that there was a satisfactory route that had been designated,

and I find no reason to change my mind. I'll talk to Charlie Miller. I see no reason to prolong that discussion any longer.

Mr. OLENSLAGER. Well, I think that it is true that in our discussions with them all spring, we have concluded that there really is no overwhelming environmental problem going through that Forest Service land. It is only the quote unquote cumulative impact that they dislike, but there is no real problem from the Forest Service point of view. That's what they led us to believe.

Senator MELCHER. Well, we'll attempt to iron that one out because that happens to be a point, I think, where the problem with the people in the community can be avoided and I don't think a tough problem at all, and if there is any reluctance to recognize that, I'll be glad to listen to him, but I don't know why there would be any reluctance, frankly.

Lee, you get into the question of need and, of course, you end up saying that Congress will decide. We're in a bind here in Congress deciding on how many votes there are our way and how many votes there are the other way, so this saying Congress ought to decide it, every one of us in the House and the Senate understands the power of the vote, but we also know that the power of the vote, you have to count them, and you have the majority, but that is not necessarily a solution for us at all. We have the opportunity of insisting on procedures that are correct under the law, and we'll take them all until we're satisfied that we've arrived at something that is satisfactory to us here in Montana.

Now, somebody testified, well, the best alternative in the EIS is to do nothing, and that surely solves any problem of routing. Again, with the circumstances as they are, that would be my preference. It would just solve my problem immediately in representing Montana in a satisfactory way and really living with myself, because I feel that if it were me, I wouldn't want one of those things around, so I have to feel that my actions should be geared that way, and if it's possible to find a route that is satisfactory for Montanans, the question of need is significant. But I'm well aware that there is not enough votes in this committee to block it on the basis of need. There are more votes in the committee that are ready to deal with a question just like I've described. If it were me, I wouldn't want it around.

There are a lot of votes like that, but on the basis of need, you'll find, I think, that most of them are on the side of being cautious, not knowing what the need is in the future, they're just going to be cautious. A vote can be frayed, there is no automatic vote on the question of need. We can create law if we've got the votes, but the need for a transmission line would be voted on by Congress. It isn't there now. We're talking about condemnation and it's a pretty pertinent point. Condemnation should not be allowed if there is no legitimate need, and that seems to be the general criteria that condemnation is based upon, but there is no specific vote on whether there is a need for this. There will be a specific vote when Bonneville Power comes and says they want an authorization to spend the money to construct one. There being a specific vote on that, and we can frame a vote on that, but that's just on that basis.

Mr. TAVENNER. But that's already happened in this case; isn't that right?

Senator MELCHER. I don't think so. We'll let the Bonneville experts who know better than anybody tell us.

Mr. FRICK. It has been authorized. There is no money in the budget for each fiscal year to spend.

Senator MELCHER. Authorized, but no money.

Mr. FRICK. No. 1982 money has been budgeted.

Senator MELCHER. But no money approved for this portion.

Mr. FRICK. No.

Mr. TAVENNER. I'm to understand that at the time of that budget approval, it would be an appropriate time to review whether Congress should approve funds for a 500 kilovolt or a 230 kilovolt or a 130 kilovolt line?

Senator MELCHER. I do, and general Congress does.

Mr. TAVENNER. This is where you're saying back to the vote problem again.

Senator MELCHER. Having the majority, or even having the substantial number. Not the whole majority.

Mr. TAVENNER. I guess part of the thing here is seeing some of those problems, but they sound very similar to almost every forum that we've gone to which is the question of need, and I think a lot of the resentment in Montana centers around that. If we were entirely convinced that there was a desperate need for a power line, then the kind of sacrifice that's involved would be something that might be another matter entirely.

Senator MELCHER. I share your concern on that and apprehension of whether the need is actually there, but the projections, I can show you our book and evaluate it.

Mr. TAVENNER. But we haven't ever seen any of these looked at or evaluated. We have never seen them from BPA. Maybe they were there when the original congressional authorization was there.

Senator MELCHER. I think we could supply you with tons of them.

Mr. TAVENNER. On the basis of need for 5,000-megawatt capacity?

Senator MELCHER. Maybe tons is an exaggeration. But needs——

Mr. TAVENNER. A lot on the need for Colstrip 3 and 4, but the discussion of where that power is going to go and how much is going to go where and what kind of a powerline is needed to take care of Colstrip 3 and 4, I've never seen anything on that and I've reviewed a lot of the material. Maybe it's there somewhere, but we can't get——

Senator MELCHER. I want to understand this. Have you asked Bonneville for it and haven't been provided with data?

Mr. TAVENNER. Yeah, we've found on the EIS that there has been no showing of need in the entire EIS, and we get nothing.

Senator MELCHER. We'll provide you the documents that demonstrate need. It isn't that the question hasn't been addressed, it's just a question of who knows, really, and do you accept the projection.

Mr. TAVENNER. So we do like we did on WPPSS, and do whatever is recommended and end up like we did with WPPSS.

Senator MELCHER. Whose we? Don't include me in that.

Mr. TAVENNER. In a sense, what we're hearing from BPA is that the kind of questions of need and the reason that they don't come up is because Congress has authorized it, so we don't ask these questions. That's part of the problem that I'm getting into and I can see what you mean about having a problem of how to get out of that position, how to move away from it, but nonetheless, the problem remains.

Senator MELCHER. Well, I guess you would agree that if Missoula goes, there is likely to be some increase in power need, and so it's just a question of projecting accurate figures. I guess first of all we've got to see if there is going to be a growth. The rural electrics do see a load growth. They're still anticipating a 6-percent annual load growth. I question whether in terms of the higher rates if they are going to be charging their customers, whether 6 percent is accurate, but it's really a question of projection in accepting whatever that projection is and the projections are only as good as the people that make the projection and nobody has a crystal ball that is accurate, so, it's inherent in the projection that there may be errors.

In the past, 30 years ago, there was a projection of need for power that was too low and it grew, the needs grew more rapidly than was anticipated. We've already passed that time or these projections seem to be too low, and now they seem to be too high and they're constantly revised. We can supply you with the documentation of need that Bonneville has based their projections on. You could break that down if you just want to look at Montana. You could look at the projections that these various utilities or electric co-ops have. You can go on that, but it's not a perfect target. It's far from a perfect target.

Mr. TAVENNER. I understand that, but even if Colstrip 3 and 4 were utilized, were turned on 100 percent, there still is no need for a 5,000-megawatt capacity because there simply isn't that much power going to come out of Colstrip 3 and 4. Maybe there is a need for the line of Colstrip 5 and 6, but we'll be back into the same position where we'll be arguing about Colstrip 5 and 6 and they'll say, well, we have a powerline that has capacity for it.

Senator MELCHER. I don't know of any Colstrip 5 and 6.

Mr. TAVENNER. I can't figure any other way to understand why there is a need for a 5,000-megawatt line unless that's contemplated.

Senator MELCHER. I know the State of Montana Power is that they do not anticipate in the future construction of any more plants at Colstrip.

Mr. TAVENNER. To utilize the energy of Colstrip 3 and 4 and the different ways that I've seen it outlined, the capacity that is there now is sufficient even if Colstrip 3 and 4 is going full blast. Part of the thing, too, is that whole question of understanding the grid system of who chose the 500 kilovolt line size, who determined that the 230 wasn't going to be rebuilt with another line strung on it. There are no figures that back that kind of data up and those are the things I'd like to see. I think Montana as a whole would like to see if that fits the bill.

Senator MELCHER. I think a proper way for us to approach the questions you pose, and they're very good questions, is for us to make sure that you have the data and then based on that data, make sure that any points that you want to make on their own data are responded to by Bonneville. It would be enlightening for the committee, also.

Mr. TAVENNER. That would be great with me if that data exists. I'd sure like to see it. I've reviewed quite a bit of it and I'd sure like to see it if it's there.

Senator MELCHER. We'll do that, Lee. Let's recess for 5 minutes.

[Recess taken.]

Senator MELCHER. We'll resume again. The committee will now hear from Mr. Ed Coffman and Mr. Phil Barrett, Clark Pork Protective Association and Northern Plains Resources Council. Is Mr. Larry Dodge here? Excuse me, Larry. We're trying to take these from east to west, so Larry should be next.

STATEMENT OF LARRY DODGE, UPPER BLACKFOOT PROPERTY OWNERS PRESERVATION ASSOCIATION, HELMVILLE, MONT.

Mr. DODGE. Well, I not only don't have a written statement, I don't have a prepared statement, but I do have a lot of feelings on this matter. It wasn't too many years ago that the Blackfoot Valley was threatened by the BPA powerline. At that point, the antipathy ran high, we did a little survey, passed out a few petitions, gathered several signatures. That was back in 1976, I believe, and the people there were decidedly against having the Blackfoot Valley demolished by powerlines. It was about the only valley left around here which didn't have a huge towering line of some sort through it, and I noticed something right then.

Since my business takes me into any number of valleys around Montana, I found that what was happening was that we were being played off, one valley against another. The people in the Clark Fork felt, well, it's time to put a powerline through the Blackfoot and the people in the Blackfoot said wait a minute, this is the only undestroyed valley we've got around here. Why put it here? Put it down where all that other stuff is, the railroad tracks, the interstate, the other powerlines, and as I looked around the State, I found just about every valley in the State ultimately threatened by this thing, including the Bitterroot. Let's put it here, no, no, let's put it there, and I noticed a pattern, the kind of thing that I studied when I was a graduate student in sociology, and that is there were a bunch of people at the top looking down and saying, why don't you and him fight and we were doing it.

Finally, the decision was made that BPA and the BLM decided that it should go over to Garrison and then find its way westward, somehow through the Clark Fork Valley, but you know by that time, there weren't any cheers in the Blackfoot Valley. We'd formed an organization, the Upper Blackfoot Preservation Association of which I am currently chair, but there were no hurrahs and we'd learned something, you know, and that something is that shoving it off on somebody else isn't satisfying after awhile, so we started doing a little research to find out exactly how this had happened to us, hoping that it would never happen again, and, of course, I consulted with people like Lee Tavenner and Adele Furby here who are on the current route and therefore, very much threatened and I learned a lot.

I learned among other things that there had never actually been a documented case made for need. What we'd had was one bureaucracy making assumptions about need and therefore, justifying another bureaucracy basing its permit or its rights-of-way or its allocation of the right of eminent domain based on somebody else's assumption. It's one of those things where you chase it down, you look around, you dig deeper and when you finally get to the bottom of it, you find no purpose at all.

Obviously with co-ops down in Washington, we can scarcely make a case today for the need on the west coast for more electricity and yet

here we go pitching it away. By just going back just a little bit, the passing of the appropriations bill for the Bonneville powerline to go ahead and build its segment of these Colstrip transmission powerlines was based upon Montana Power's projections of what the power needs were going to be over the next few years, and they're wrong. I think I could probably get Montana Power people to admit they're wrong right now. In fact, I once sat in a closed session with the officials, including Paul Smukel and oh, I forgot the other man's name at this point. Let's see, Joe Maloelweek, and I said, do you really need these things? Oh, yeah, we need them. Well, can you prove it? Well, they couldn't prove it. I was in there with the boll weevils, the famous powerline subcontractors from Minnesota and by the time that session was over, the greatest documentation of need that we got out of Montana Power was a slammed fist on the table and a Montana Power official saying, look, it took us 6½ years to get those permits and we're going to build those things anyway. In other words, they didn't care about the need, and so now we're looking at a situation today where the need is still unestablished.

We do have the powerplants built and therefore, we have a current contemporary need to get rid of the power. It's here, it's coming, 3 and 4 are being built. Where do you ship the deadly stuff? Who knows? I don't think the west coast can make a claim for it anymore. They're in decline. The Seattle area doesn't need any more juice and besides, Washington is shipping its power out now. They've got a problem getting rid of what they've got over there, but given the fact that we have units 3 and 4 coming along and the capital investment is tremendous, it's probably true that we now need to get rid of the power. What to do. There has been several suggestions. They are required by law to tie into the grid someplace somehow. That's the kind of excuse I'm talking about. The need goes unexamined, but the fact is that we've got these plans and they, by law, have to be tied into something, so, my recommendation at this point is to look at it this way. Let's find the least offensive, least environmentally damaging, least costly way out of this thing. It's one of those things like Vietnam, when you're in to your waist, let's say we go in up to our neck and when you're up to your neck, it's easy to say, let's go in and drown, and I don't want to drown, but I think there is some halfway examined solutions that might be of interest at this point.

Perhaps getting the lines as far as Garrison, tying them into whatever is there. Therefore, taking the output and tying it into the grid legally should be sufficient, maybe it's not necessary to run it to Hot Springs. We're also looking at a siuation right now where Montana Power is not operating at full capacity, it doesn't know what to do with the electricity that it has now either. Extensive long overhauls on units 1 and 2, shutting them down for long periods and nobody cares, there is no brown house, no nothing. The plant building is sitting there idle. Montana Power running its most expensive generators when it does operate. Therefore, to convince the PSC that it needs further increases in power, in pricing, in rates. So, I say their backs are up against the wall, so are ours. The most sensible thing to do at this point, as I said, is to find the least offensive way out, the least costly way out, and that might be to skip the entire business of building powerlines through western Montana, to tie it in as short as we can to make the

lines as small as we can, to encourage Montana Power to find our outlets, perhaps eastern outlets for the electricity that's producing. I see no further need to escalate the concept of need and to build on these assumptions for further capacity. I think it's time we faced reality. What we have here is a bunch of bureaucracy making themselves necessary and I'm tired of it. Thank you.

Senator MELCHER. Thank you, Larry. Ed Coffman and Phil Barrett, we'll hear from you now, Clark Fork Protective Association and Northern Plains Resource Council.

STATEMENT OF PHILIP M. BARRETT, NORTHERN PLAINS RESOURCE COUNCIL, MISSOULA, MONT.

Mr. BARRETT. I want to thank you for the opportunity to speak before the subcommittee today. For the record, my name is Philip M. Barrett and I live at 1537 South Seventh West in Missoula. I've been an active member of the Clark Fork Basin Protective Association and the Northern Plains Resource Council for the last 2½ years.

The CFBPA questions the need for the BPA's double circuit 500-kV lines through Missoula and contends that BPA has not adequately evaluated the benefits of not building these lines. Colstrip 3 and 4, and hence these lines, were planned when utilities assumed a roughly 7-percent regional demand growth rate for electricity. At the present time, the most ambitious growth rate, that of the PNUCC, is 2.2 percent and planned generating units throughout the region are being canceled. Even without Colstrip 3 and 4, surplus generating capacity exists and this spring BPA unloaded power to California at the ridiculously low price of one-half cent per kilowatt-hour. The Northwest Conservation Act Coalition has demonstrated that, even with high economic growth, regionwide consumption of electricity will not grow at all in the next 20 years if cost-effective conservation measures and renewable energy resources are implemented in the region.

I'm submitting for the record the NCAC model plan summary demonstrating how that could come about. Under the model plan, the generating capacity of Colstrip 4 and many other planned generating resources in the region is not needed. Not building these resources means saving money for the consumers and avoiding the desecration of the Missoula area with new high voltage transmission lines. BPA has not adequately explored these possibilities.

Even if Colstrip 4 needlessly comes on line, CFBPA is not convinced that a new double circuit 500-kV line west of the Garrison substation is needed. As a result of the shutdown of the smelters at Anaconda and Kellog, existing high voltage transmission lines in the area have a great deal of excess capacity. Considering the many costs of building and the many advantages of not building 500-kV lines through western Montana, CFBPA urges BPA to use existing transmission lines to wheel power for Colstrip. BPA has not adequately explored this possibility.

These issues are expanded upon in two attached documents and these documents also address other issues not satisfactorily resolved by BPA including the lack of direct comparison of alternatives evaluated under different studies, health effects, undergrounding, segmentation, and depreciation of property values adjacent to rights-of-way.

The BPA has failed miserably to study the effects of establishing a new major utility corridor with this transmission lines. BPA has refused to fully evaluate the suitability of this and other existing corridors for this expansion and hence we do not know if new corridors are proliferating before existing ones are saturated. In particular, should BPA be blazing a new corridor in the Nine Mile-Superior-St. Regis area west from Missoula when the lower Clark Fork corridor appears to have room for at least one more high voltage line? This is an especially pertinent question considering that the reenforcement of the Kellogg-Wallace area was a major BPA justification in choosing the St. Regis area route, whereas electricity demand there has roughly halved with the shutdown of the Bunker Hill smelter.

Paralleling existing linear facilities is such a common practice that it is strictly irresponsible for the BPA, a Federal agency supposedly working for the good of the people, to open a new utility corridor without first demonstrating that the chosen route is suitable as such. Nothing is stopping Northern Tier from choosing to parallel these proposed lines in its new pipeline application, and for no other reason than that, it is imperative that BPA fully evaluate the corridor suitability of all alternative routes for the lines before the final EIS for the Garrison-Spokane segment is submitted.

Whether intentional or not, Bonneville's building of these lines has resulted in a circumvention of Montana's Major Facility Siting Act and the avoidance of the payment of State and local taxes. This is totally unacceptable to the CFBPA. We are attacking this problem on several fronts and, at this point, we request your assistance in one of these efforts. BPA is currently revising its customer service policies, and we would like to see the BPA adopt a new policy that would fundamentally change the way the Federal agency operates in Montana. We think the BPA should serve privately built new electrical generation units only by contracting with the private utilities to plan, build, operate, and maintain new transmission lines. Ownership of the lines should stay with the private utilities and thus the utilities would be required to pay property taxes on them.

More importantly, as tax payments are a matter of nickels and dimes in comparison, retaining private ownership would insure that the transmission lines were subject to compliance with all provisions of the Major Facility Siting Act. If this policy had been in effect nearly 5 years ago, there would be no lingering question now as to why the Montana Power Co. requested BPA to build these lines. Obviously, BPA and the investor-owned utilities will resist this plan and we would like to enlist your aid in pressuring BPA to make this change.

Thank you for the opportunity to address you.

[The attachments to Mr. Barrett's statement follow:]

Garrison - Spokane Draft EIS hearing, Apr. 1, 1982

CFBPA is concerned that these hearings are premature. On April 30 and May 1, hearings will be held before the Montana Board of Natural Resources in Helena concerning the first segment of this line. CFBPA has always maintained that the placement of the first segment of the line will directly affect the location of the second segment. Therefore, CFBPA feels that an extension of the May 28 comment period deadline and possibly additional hearings on the draft EIS for Garrison-west may be needed. Should that be the case, we sincerely hope that BPA will be willing to accommodate those needs.

NO ACTION ALTERNATIVE TESTIMONY

CFBPA supports the "No Action" alternative, that is the alternative of not building the line west of Garrison, at this time for the following reasons:

1. Need for the electricity-- All of the data that the issue of need for the Colstrip units was decided on, and which BPA relies on in its draft EIS is outdated. The most recent data cited in the EIS regarding this issue is the 1979 Colstrip EIS. Since that time, the electrical demand foreseen by utilities has not materialized. BPA's own recent forecast shows a growth rate for electrical demand of only 1.7% compared to the 7% figures cited by utilities in the past. A recent BPA press release quoted the administrator as saying that the region will be in surplus in the next few years. Because of that surplus, one of the existing Colstrip units and the Corrette coal-fired unit at Billings are not producing electricity at the present time and BPA is spilling water over existing dams because it cannot find a market for the electricity that such water could generate.

The figures in the regional load table on page I-10 of the DEIS are consistently off on the high side by about 1000 average megawatts when they are compared with the numbers BPA's latest forecast. As costs of WPPSS units 1,2, and 3 come into the rate base, CFBPA believes that even BPA's forecast numbers may be high. Additionally, if BPA does in fact carry out the mandate of the Regional Power Act diligently, studies such as the Northwest Conservation Act Coalition's "Model Electrical Plan" for the region, show that Colstrip power will not be needed.

2. Costs of building the line-- CFBPA feels that environmental and social impacts from this line will be great, and that BPA will be unable to mitigate most of them. These costs represent a real, dollar cost and CFBPA feels, that coupled with the actual construction costs of the line, they far outweigh the costs of not building the line.

On page 4, paragraph 2 of the EIS summary, BPA states that replacement cost for power transmission losses that would result from the "No Action" alternative would be about 2

million dollars for BPA and WWP, and several times that for Montana Power. Depending on what "several" means, CFBPA takes that to mean that making up for additional transmission losses if these lines aren't built will cost about 8-10 million dollars total. When compared to the total cost of $190 million, plus substantial environmental and social costs of constructing the lines, it seems much more prudent to not build the line than to build the line.

3. Benefits of "No Action" alternative-- Page 4 of the summary section of the draft EIS points out in paragraphs 3,4 and 5, the many benefits of not building this line.These include the many environmental and social costs foregone, land not taken out of production, and the elimination of possible adverse health affects caused by the lines. CFBPA feels that these benefits far outweigh the decrease in reliability that may occur in the Pacific Northwest grid system without these lines.

4. Use of existing 230-kilovolt line -- CFBPA feels that in light of Anaconda's recent shutdown, the existing 230 kilovolt transmission line has additional capacity that was not anticipated at the time this project was started. Page 3, paragraph 3, alludes to the fact that these lines are only needed in the case of an outage, in other words as a backup. CFBPA feels that in light of the many costs of building these lines, and the many benefits of not building them, which we have outlined above, suffering those costs does not balance the small benefit of having a backup system to wheel Colstrip power. With the additional capacity now existing on the 230-kilovolt line, CFBPA urges BPA to use that line for wheeling of the Colstrip electricity.

SUMMARY

Because of the above reasons higher dollar, environmental, and social cost if the line is built, questionable need for the electricty in the region, additional capacity on the 230-kv line already in existence, and the ability of BPA to wheel Colstrip power on existing lines most,if not all,of the time, CFBPA supposrts the "No Action" alternative and requests that BPA adopt that alternative as its preferred alternative from Garrison-west.

Garrison-Spokane Draft EIS hearing, April, 1982

GENERAL COMMENTS ON THE GARRISON-WEST DRAFT EIS-- CFBPA

1. There still has been no document for the public to scrutinize that shows a direct comparison of all potential routes. For instance, we have never seen the original state approved route directly compared to what is now BPA's preferred route. We feel that this is a violation of NEPA and request that a comparison of all routes be made and be published in a supplemental EIS for the public's srutiny.

2. We demand that BPA post a bond guaranteeing that they will reimburse any person who suffers adverse health affects from these lines. BPA acknowledges that the jury is still out on the question of long-term health effects of high-voltage transmission lines(page 10 of the summary section of the EIS, paragraph 2). Such studies as Dr. Marino's, a University of Colorado study,and the Morton study show possible long-term health effects such as leukemia, central nervous disorders, and problems with the human immune system. CFBPA does not feel that the people who end up living near this line should be the guinea pigs for the rest of society.

3. If these lines are ever built through Miller Creek or the Rattlesnake, CFBPA demands that they be buried. Compared to the health, visual, and safety impacts that overhead lines would cause in such areas, CFBPA feels that the additional cost of undergrounding the lines is small, and that any such cost is merely a cost of generating coal-fired electricity at the mine rather than at the load-center.

4. CFBPA feels that segmenting the line at Garrison is illegal, and that it directly biases where the line west of Garrison will be located.

5. CFBPA requests that a new study of need be done, since all data on which the issue of need for this line is outdated.

6. Section 3(4)(B) of the Pacific Northwest Electric Power Planning and Conservation Act requires BPA to include all quantifiable environmental costs when determining the"system cost" of a resource. CFBPA believes that decreased property values of property that is near this transmission line route is a quantifiable environmental cost of the project, and demands that BPA not only include it in the system cost of the Colstrip project, but that the owners of such property whose appraisal has dropped as a result of the line be reimbursed by BPA..

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The Clark Fork Basin Protective Association
c/o Ed Coffman, President
4505 Fox Farm Road
Missoula, Montana 59802

The Honorable John Melcher
1123 Dirksen Building
Washington, D.C. 20510

August 23, 1982

Dear Senator Melcher,

As you know, our organization has worked for two years to make the Bonneville Power Administration more responsive to citizen concerns about the siting of the twin 500kv lines which it will be building through our state, west from Colstrip. Since the Montana Board of Natural Resources ruled that the BPA was in compliance with our Major Facility Siting Act, and construction of the Townsend-Garrison segment of the line is about to begin, we would like to bring to your attention our concerns for the Missoula valley. All of the routes favored by the BPA through this valley will pass through residential, urban areas in Missoula. In fact, the most densely populated region that the lines will cross in the entire state will be in Missoula. We are deeply concerned about the visual,economic, and aesthetic, environmental, and adverse health effects that these lines will have, and feel that there is only one way to mitigate the negative impacts.

For two years, we have pressured the BPA to explore the option of undergrounding the transmission lines for short segments where they would cross densely populated areas such as the Rattlesnake and Miller Creek. In either case, a segment no longer than 4.5 miles would be buried to alleviate the serious impacts that will be felt by hundreds of people in the area. Among the most serious of these impacts is the potential health hazard of high voltage, over head lines from electro-magnetic radiation. Recent studies show new concerns about the biological threat such transmission lines pose to humans. These studies, by Battelle Laboratories, a group that traditionally denied any biological effects from powerlines, now show that there are definite biological effects.

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In response to our urging, the BPA has explored underground burial of the lines, and hired the consulting firm of Dames and Moore to explore that option. In the final consultants report, Dames and Moore suggest that undergrounding high voltage lines is a feasible alternative and poses no major engineering problems. BPA's major objection to this option is one of cost. And while it is certainly timely for the BPA to be considering the high cost of energy, in this case, it is false economy. The cost of burial for a short segment of the line, roughly four miles, would be $29 million dollars above the regular cost. However, if each of the Colstrip consortium utility customers paid for the undergrounding over the life of the project, it would cost about .41¢ per year per customer. (This includes 12 1/2% interest over the 37 year lifespan of the project.)

It is our position that the true cost of these powerlines must be borne by the customers who will benefit from the end product. The true cost of massive, highly centralized projects are rarely paid for by the consumer. In this case, the true costs which are <u>not</u> borne by either the utilities or the consumers include the major health, economic, environmental, and social impacts.

We are writing to urge you to intercede on our behalf with the BPA; to pressure the BPA to take the only acceptable alternative of undergrounding the lines through our lovely valley. We would like to ask you to request the BPA to include undergrounding as mitigation of adverse effects in the Miller Creeek and Rattlesnake areas in the final Environmental Impact Statement. The E.I.S. is nearing completion, so immediate action is necessary on your part.

This has been a long battle, and we appreciate your help and attention to the situation.

Thank you,
Ed Coffman

Ed Coffman, President
for the Members of the C.F.B.P.A.

cc: Missoula County Commissioners

Study finds biological effects in powerline electrical fields

By KEVIN MILLER
of the Missoulian

Missoulian 5/15

"Definite biological effects" have appeared in laboratory animals exposed to electrical fields like those under 500-kilovolt powerlines, one of the heads of a government- and power industry-funded study said Wednesday.

Larry Anderson, a biochemist for Battelle Northwest Laboratories, was interviewed by telephone from his Richland, Wash., office.

He will present a lecture on the biological effects of powerline electric fields at noon Thursday in Science Complex 221, on the south side of the University of Montana campus. The lecture is sponsored by the Northwest College and University Association of Science.

Anderson is assistant director of Battelle's 6-year-old study on the biological effects of powerlines.

He said Battelle's research to date leaves open the possibility that the lines may be harmful to humans. But he cautioned that the study hasn't progressed far enough to suggest that they pose a hazard.

"To a scientist, a biological effect doesn't equal a hazard," he said.

"We see some definite biological effects due to exposure (to electrical fields from the lines). But because we don't know the mechanism that causes the effects, or the ramifications of those effects, we're not at the point where we can say this is hazardous or not hazardous."

Battelle's powerline studies are financed mostly by the Department of Energy, Bonneville's parent agency, and by the Electric Power Research Institute, a utility industry group.

The research project, which Anderson called "by far the most comprehensive" of its kind, uses electric fields "scaled to approximate what a man would experience standing under a 500-kilovolt line."

The project includes several separate studies. One of them has shown that the electrical fields cause "increased excitability" in small laboratory animals, said the researcher.

Exposure to the fields makes the animals' nervous systems more sensitive to stimulation, according to Anderson.

Another study showed an increase in the rate of teratogenesis, or birth defects, in miniature pigs.

"The effects that we've seen (in the two studies) are fairly subtle," added Anderson. However, he said, "it appears sure that they are occurring."

The Bonneville Power Administration wants to build a 500-kilovolt line across central and western Montana. It would carry electricity from the Colstrip power plants to the agency's Pacific Northwest Power grid.

Confirming or discovering the biological effects is only part of the researchers' work, Anderson said.

Their next steps are to determine how long those effects last and whether they are pronounced enough to constitute a hazard.

The goal, he said, is to provide an estimate of how much risk is associated with the powerlines. After that, deciding whether and where to build the lines "is not the scientist's job," but is a political decision, according to Anderson.

He noted that Battelle's researchers might not get to the next steps of the study because of federal budget cuts.

"With what's happening with the funding level, it appears that the study will be cut off this year," he said. "But budgets change from week to week."

Anderson said he'll present more details during his lecture, and that he'll try to discuss the implications of Battelle's findings.

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Research raises powerline safety questions

By KEVIN MILLER
of the Missoulian

Biochemist Larry Anderson, a powerline health-effects researcher for Battelle Pacific Northwest Laboratories in Richland, Wash., cued up a color slide to start his lecture.

Thursday's audience of about 70 people at the University of Montana saw a group of small children playing soccer in a Seattle-area schoolyard.

"That is of concern," said the scientist, gesturing toward the picture. The smiling children appeared oblivious to the steel towers that soared above them and to the high-voltage transmission lines that sagged over their heads.

"Because there is a question," he added. "Is it safe?"

Maybe it is and maybe it isn't safe to spend much time beneath lines such as those in the slide, Anderson said. The lines are similar to those the Bonneville Power Administration wants to build across Montana to carry electricity from Colstrip power plants to the agency's Pacific Northwest power grid.

Anderson recounted some of Battelle's research on the subject. In clinical terms, he told how two large Battelle studies have shown a definite link between powerline electrical fields and abnormalities in animals' nervous systems, as well as a possible link with birth defects.

The studies employ several scientists and some of the most sophisticated equipment in the world. They are financed not by powerline opponents but by the federal Department of Energy and the Electric Power Research Institute, a utility industry group.

The first trick of the research is to assure that the laboratory electrical fields simulate those a person would experience, Anderson said.

High-voltage powerlines create a field of energy between themselves and the ground. The field is vertically oriented, and a person standing in it becomes a conductor, carrying the electricity down to the ground.

Since people are better conductors of electricity than air is, energy in the field is actually drawn toward the person. The electrical charge on top of a person's head in a field below a 500-kilovolt line is about 18 times higher than the charge in the air around the person, according to Anderson.

Standing in the energy field also creates a charge inside a person, but the below-skin charge is typically lower than the charge in the surrounding air.

In Battelle's labs, experimental rats and mice lived in specially designed cages and were exposed to electrical fields for 20 hours a day. The other four hours were set aside for taking care of the animals and testing them.

Other groups of animals lived in identical settings and were treated the same as the exposed animals, except that they weren't exposed to electrical fields. Neither the

(Turn to POWERLINE, page 2)

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From page one

Powerline

(Continued)

people who cared for the animals nor the reseachers who tested them knew which ones had been exposed to electrical fields, said Anderson. The humans could not subconsciously compensate for the exposure by treating the exposed animals differently.

The most "robust" results of that study, said Anderson, involved an increased sensitivity in the nervous systems of the exposed animals and a strong effect on their pineal glands.

Research results show that the increased nerve sensitivity stems from a heightened excitability in the synapses. Synapses are where nerve impulses jump from one neuron, or piece of nerve, to another.

The exposed animals also showed abnormalities in the activity of the pineal gland. located at the base of the brain. Sometimes known as the "third eye," the gland remains something of a mystery, but is thought to be the center of an animal's biological clock, Anderson said.

Researchers saw definite abnormalities in pineal gland activity in the exposed animals, especially at night. But they aren't sure what that means, he said.

He said Battelle's research has also shown that bone fractures tend to heal more slowly in exposed animals. He noted that the Battelle studies showed no effects in many other areas of biological activities, including general illness, cardiovascular function or fertility.

He also told how one Battelle study showed an increase in birth defects in pigs exposed to the electrical fields. However, he noted that the study may have been "confounded" by a dysentery outbreak in the pig population.

The researchers had to treat the pigs with antibiotics to cure the dysentery, he said. Because there's no way to be sure the drugs didn't have something to do with the birth defects, it's hard to interpret the results.

"There is a potential effect here with birth defect," said Anderson. "That's something that neeeds to be cleared up, certainly."

Anderson aknowledged after the lecture that it would have been better to do conclusive research on powerline health effects before the high-voltage lines became a fact of American life. But he said the concerns about safety arose after the lines became commonplace.

"It's kind of an after-the-fact thing," he said. "But it's the best we've got."

MODEL

ELECTRIC POWER AND CONSERVATION PLAN
for the
PACIFIC NORTHWEST

— Summary —

Prepared by the
NORTHWEST CONSERVATION ACT COALITION
May 5, 1982

NORTHWEST CONSERVATION ACT COALITION

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For more information or additional copies, contact Mark M. Reis, Director, Northwest Conservation Act Coalition, P.O. Box 20458, Seattle, WA. 98102 206-624-2875

Ralph Cavanagh
Nat. Resource Defense Council

PREFACE

The passage of the Pacific Northwest Electric Power Planning and Conservation Act (PL 96-501) signalled a new era in Northwest power planning. It was said to have marked an end to the region's utilities' decade-long search for "planning certainty" and to have satisfied their desire for a "stable framework for resource development." Few of those involved in the implementation of the Act would describe the current situation as either stable or certain. But all will admit to the Act's extraordinary new energy planning and development tools now being applied in the region.

Those tools reflect the work and demands of citizen groups during the legislative evolution of the Act:

- All power planning is being carried out by an **independent** agency, the Northwest Power Planning Council;
- The primary criterion for that planning is "**cost-effectiveness**" — that is, every resource acquired by the Bonneville Power Administration must be the cheapest available;
- **Priority** shall be given to conservation and renewable resources;
- The Bonneville Power Administration has the financial and other authorities necessary to implement the **full** range of resources sponsored by **any** entity; and
- The fish and wildlife resources of the Columbia River System **must** be "preserved, mitigated and enhanced."

The implementation of the Power Act and, specifically, the utilization of these key new authorities is what prompted the formation of the Northwest Conservation Act Coalition. After observing and criticizing the Bonneville Power Administration and the region's utilities and large power-consuming industries for years, the thirty-seven environmental, labor, ratepayer and other citizen organizations determined that, together, they must enter the regional energy planning debate and put forward a comprehensive proposal for future power development. This "Model Conservation and Power Plan for the Pacific Northwest" is that proposal. It outlines what the region could do to stabilize rate increases, mitigate environmental impacts, make energy development and decisionmaking more responsive to local communities and promote economic development by examining the financial impacts of our energy policies before, not after, setting those policies.

Beyond a simple theoretical suggestion, the Model Plan is offered as a challenge, a challenge to the utilities, the industries, the Bonneville Power Administration and, most importantly, to the Northwest Power Planning Council. This is a picture of what the region could do, how aggressive we could be in applying the new authorities and tools of the Northwest Power Act. The Mode' Plan is not a forecast of what the future will be; it is a blueprint of what the future could be. That future will come about only if the region decides to choose its energy future, rather than awaiting that future to befall us.

In presenting the Model Plan, the Coalition owes a tremendous debt to the staff of the Natural Resources Defense Council, one of our founding members. Without their technical and programmatic expertise, the Model Plan would be a substantially less valuable document. In addition, the generosity of The Abelard Foundation, A Territory Resource, The Bydale Foundation, The Youth Project and The Northwest Fund for the Environment has, in part, made our work possible.

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This Model Plan is a blueprint for securing a cheaper, cleaner, and less unsettled electrical energy future in the Pacific Northwest. Its provisions are governed by seven principles in the by-laws of the Northwest Conservation Act Coalition:

> Specifically, the Coalition will advocate that the implementation of the Pacific Northwest Electric Power Planning and Conservation Act:
>
> - maximize the use of environmentally acceptable and cost-effective energy conservation and renewable resources;
> - avoid unnecessary thermal power development;
> - optimize regional economic development through the promotion of labor-intensive energy resources and local financing;
> - assure that the financial assistance and local development provisions of the Act be made available on an accelerated basis to those most in need of such provisions — the low income and elderly;
> - promote equitable and resource-conservative rate structures;
> - protect the natural environment, including the fish and wildlife resources, of the region;
> - maximize the use and development of community-based resources and structures in implementation of the Act.

At its April 1982 meeting, the Coalition added an eighth principle to this list:

- Ensure the preservation of democratically controlled local public power systems in the Pacific Northwest (*i.e.*, public utility districts, cooperatives, and municipals).

The sections that follow explain how the Model Plan advances each of these goals. The body of the Plan consists of chapters and appendices that explain in detail the technical and policy justifications for the Plan's recommendations. The bulk of that work was submitted to the Coalition on January 22, 1982, and is now being revised in response to comments. This summary, which was endorsed unanimously by the Coalition at its April 1982 meeting, describes the final product that tial flexibility in choice of design, and allow trade-offs between different measures as long as an overall target make the Model Plan work for them. Among other things, the Plan offers a way to control increasingly unmanageable residential utility bills; expand job opportunities, and stimulate a depressed regional economy; decentralize control of energy resources and increase local self-sufficiency; and convince local utilities to reject involvement in high-risk, high-cost efforts to build new coal and nuclear power plants.

A theme that dominates the Model Plan is the importance of public participation in regional energy planning, with particular reference to the implementation of the Pacific Northwest Electric Power Planning and Conservation Act ("the Regional Act"). The ultimate beneficiaries of the Model Plan can and must assume a leading role in its implementation; the Regional Act expressly declares Congress's determination "to insure widespread public involvement in the formulation of regional power policies." True to that spirit, the Model Plan itself already has undergone extensive review and comment, and will continue to evolve as that process continues.

I. Maximizing the Use of Environmentally Acceptable and Cost-Effective Conservation and Renewable Resources

In passing the Regional Act, Congress made clear its view that no new coal or nuclear power plants should be built in the Pacific Northwest until all options had been exhausted for developing cost-effective conservation and renewable resources. The economic and environmental justifications for this decision are obvious. Nonetheless, the region's utilities are still attempting to secure construction permits for **eight** new coal and nuclear ("thermal") plants in Oregon and Washington alone, while seeking to retain the option of completing two recently "terminated" plants, WPPSS Nuclear Units 4 and 5.

The Model Plan assembles an extensive — although by no means exhaustive — inventory of conservation and renewable energy measures that would cost less than, and eliminate the need for, new thermal plants. This analysis begins with an estimate of the economic and environmental costs of additional coal and nuclear generation. Discussion then turns to the nature and potential of less expensive conservation and renewable energy alternatives.

A. The Cost-Effectiveness Threshold: Economic and Environmental Costs of New Thermal Plants

The Model Plan develops separate estimates for the economic costs of new coal and nuclear plants, taking into account — as the Regional Act requires — construction and maintenance, transmission, waste disposal, end-of-cycle costs, and fuel costs. The Plan then addresses environmental costs, and argues — based on a detailed analysis of the different impacts of various measures — that the quantifiable environmental damage (including destruction of human life and property) associated with coal and nuclear facilities is significant-

ly greater than that accompanying wind machines, solar heating systems, and most conservation measures. Projected dollar costs of coal and nuclear facilities are based on Creston Unit 1, the next coal-fired plant scheduled for construction in the region, and WPPSS Units 4 and 5, the nuclear units now under construction that are farthest from completion.[1] The results of the calculation are presented below.

	Creston Unit 1	WPPSS Units 4 & 5
Construction, maintenance waste disposal, end-of-cycle costs, fuel costs	7.0¢/kWh	8.2¢/kWh
Line losses and transmission costs	1.4¢/kWh	1.6¢/kWh
Quantifiable environmental costs	2.0¢/kWh (minimum)	2.0¢/kWh (minimum)
Total	10.4¢/kWh	11.8¢/kWh

These costs are given in 1982 dollars. Actual costs to consumers in future years would be higher, reflecting the impact of inflation.

These results mean, concretely, that the region is better off investing in measures that cost less than 10.4 cents/kWh than purchasing Creston or a comparable coal plant, and that this "cost-effectiveness threshold" increases to 11.8 cents/kWh if the alternative is WPPSS Units 4 and 5 or a comparable nuclear plant.[2] The Model Plan identifies many such alternatives, which are describes below; what bears emphasis here is that the list should not be considered exclusive. Additions can and will be made continually by Coalition members and others.

B. Conservation and Renewable Energy Measures

The Model Plan's discussion of measures is intended to serve two purposes. First, it shows how to determine whether a particular conservation or renewable energy option is cost-effective. The same methods can be applied to any measure that is not discussed specifically in the Plan. Second, the Plan projects the likely impact of widespread adoption of certain readily available and well-understood measures, for which costs and savings could be documented and quantified.

Thus, the Plan assembles packages of cost-effective conservation and renewable energy measures for "retrofitting" existing homes, commercial buildings, industrial processes, and irrigation systems. It also identifies ways of ensuring that such measures are included in new buildings, processes, and systems. The next four subsections give details on the Plan's recommendations for each major category of electricity use.

These recommendations focus on buildings and equipment, because efficiency improvements in "hardware" are capable of producing reliable energy savings or production at no sacrifice in comfort or convenience. Changes in energy-related behaviors are and should remain the choices of each individual. However, innovative education programs, which increase people's understanding of the energy-related impacts of their activities, show promise of inducing substantial amounts of low-cost conservation and increasing the energy savings realized from Model Plan measures. Programs that increase the energy management skills of Northwest citizens should be implemented on an experimental basis, and the resulting benefits should be evaluated in field-test settings. Since the Model Plan does not assume energy savings from such programs, the Plan's assumptions regarding future energy needs are conservatively high.

1. Residential Sector

Conservation measures are identified for all of the dozen or so major end uses that account for residential electricity consumption. Conservation "packages," for existing homes, include:

- high levels of ceiling, floor, wall, and water heater insulation (generally up to R-49, R-38, R-11, and R-19 respectively), **where structurally feasible**;
- leak-sealing to reduce air infiltration, accompanied by caulking and weatherstripping around doors and windows;
- low-flow showerheads and plumbing;
- substitution of high-efficiency heat pumps for resistance space heaters;
- substitution of solar units or high-efficiency heat pumps for resistance water heaters;
- reducing heat loss from windows through additional panes, thermal shutters, and surface treatments;
- air-to-air heat exchangers, where needed to ensure high indoor air quality;
- passive solar retrofits, including greenhouse or sunspace additions, Trombe wall conversions in existing masonry walls, and thermosiphon panels;
- high efficiency electric appliances; and
- high efficiency lights.

It should be noted here that nearly all these measures, raised in some instances to still higher levels, were included in a conservation proposal recently submitted to the Bonneville Power Administration by the Pacific Power and Light Company ("The Hood River Pilot Conservation Project," February 24, 1982).

The Model Plan recognizes that not all measures are appropriate or practicable candidates for installation in all existing homes. Thus, in projecting the impact of retrofits on regional energy needs, provision is made for the inability of many houses to accommodate certain measures, due to structural or other constraints. Moreover, although conservation measures are discussed on a region-wide average basis, implementation

strategies are tailored to the needs of individual houses and climate zones. Each house would be visited by an energy auditor, who would produce a list ofconservation and renewable energy measures appropriate for that house. This list would generally include some or all of the measures described above, although in climates east of the Cascades still more extensive retrofits often will be cost-effective. In many cases, special family characteristics will lead auditors to broaden the scope of their recommendations. For example, a large family with above-average hot water needs might benefit by installing both a solar water heater and a heat pump back-up system, along with a super-low-flow showerhead.

We assume that retrofits will be phased in gradually, and that some households will decline to participate in all or part of the retrofit programs. Also, recognizing the uncertainties inherent in predictions of this kind, we identify a range of likely outcomes bounded by "high conservation" and "low conservation" scenarios. The table below illustrates this procedure, listing assumptions used to project residential needs for space heating in future years.

Percentage of Total "Achievable Savings" From Space Heating Retrofits Realized Between 1980 and 2000

	Low Conservation Case	High Conservation Case
1985	9%	25%
1990	39%	70%
1995	54%	90%
2000	60%	95%

These and comparable assumptions provide specific targets for use by Coalition members and others in monitoring the progress of retrofit programs at the local level. **On average, households participating in the Model Plan program should realize reductions in electricity needs of about 50%; in some instances, savings will exceed 75%.** The calculation of energy savings assumes **higher** thermostat settings in the aftermath of retrofits, as a conservatism. **The average cost of residential sector savings is less than 3.5 cents per kilowatt-hour, in 1982 dollars.**

For new houses, the Model Plan recommends enactment of building codes calculated to minimize the lifecycle cost of housing to occupants (purchase price plus utility bills). The proposed codes incorporate substantial flexibility in choide of design, and allow trade-offs between different measures as long as an overall target for energy consumption per square foot is reached. This "energy budget" is based on a prototype house incorporating passive solar heating, a high-efficiency heat pump, and cost-minimizing insulation levels. Actual houses need not resemble the prototype; they can substitute more of some measures for less of others.

Energy budgets will need to be adjusted to reflect differences in regional climate zones. The Model Plan uses the zone west of the Cascades to illustrate the methodology and results. Solar and conservation measures, working together, typically will reduce space heating needs per square foot of housing by 90% compared with current practice. The proposed building codes will encourage, in addition to measures discussed for existing homes, the widespread incorporation of passive solar design principles in new housing, and the accelerated development of solar-assisted heat pumps and ground water-based heat pumps. These codes would be preceded and supplemented by financial incentives based on the energy performance of new housing construction, which would override the increase in purchase prices and help more people qualify for home ownership.

The Model Plan does not seek to encourage installation of electric heat in new housing, but neither does it view as an acceptable "conservation" alternative the construction of inefficient structures that are heated

Savings Realized by New Appliances, Compared to Current Average Consumption, After 1985

Appliance Category	Low Conservation Case	High Conservation Case
Refrigerators	46%	70% (after 1987)
Freezers	31%	73% (after 1987)
Cooking Equipment	17%	40% (after 1990)
Televisions	55%	55%
Central Air Conditioners	35%	51%
Room Air Conditioners	28%	56%
Clothes Dryers	10%	10%

with fossil fuels. Building codes and financial incentives for upgrading the construction of housing shells should not discriminate among heating sources. However, hook-up charges for new electric resistance-heated houses are an appropriate means of recovering the true costs such heating systems impose on the region, unless — in accordance with the Model Plan's recommendations — the building codes applicable to such houses have been revised to reduce space heating needs to trivial levels.

The Model Plan also describes regulatory and incentive approaches for increasing the efficiency of appliances. The table opposite lists savings over current average consumption for the major appliance categories that will result if these recommendations are adopted.

2. Commercial Sector

In the commercial sector, where variation in building types and uses is much greater than that found in the residential sector, the Model Plan relies on a combined program of audits and incentives to reduce electricity needs of existing buildings. Generic measures recommended for retrofits include:

Lighting
- use daylighting to replace artificial lighting
- reduce excessive general or background lighting intensities
- focus high illumination levels exclusively on work surfaces
- use more efficient bulbs and fixtures

Cooling
- reduce cooling loads through lighting conservation
- reduce solar heat gains by shading windows
- use outside air for cooling whenever possible

Space Heating
- increase insulation and seal leaks
- install high-efficiency heat pumps
- cut back ventilation to code standards
- recover heat from ventilation air

Water Heating
- increase heating efficiency by installing solar water heaters or heat pumps
- reduce hot water needs by installing more efficient dishwashing appliances or low-flow plumbing units

Based on these and related measures, we assume that 15% savings can be achieved, on average, through measures that will pay for themselves in reduced electricity bills in two years or less. That figure increases to 40%, again on average, if incentives are in place to induce building owners to take advantage of the full potential of cost-effective efficiency improvements. The table below gives the Model Plan's targets for implementation of the 15% and 40% retrofits, respectively.

Savings realized through this program would cost ratepayers less than 40% as much as an equivalent amount of output from a new coal or nuclear power plant. In addition to retrofits, the Model Plan recommends adoption of lighting standards for existing commercial buildings, to promote de-lamping, upgrading of efficiency, and lighting system redesign.

For new all-electric buildings, the Model Plan proposes building codes based on energy consumption targets averaging 6 kWh per square foot, a reduction of more than 50% from levels typical of current new construction. As in the residential sector, flexibility will be the corne. :one of the new codes. Lower lighting energy needs, which would result from systems emphasizing daylighting and automatic switch-offs, could be used to displace heavy insulation; higher lighting consumption could be compensated by extra-efficient cooling systems and active solar units. Factor-of-three or greater variation in lighting and insulation levels would be within reach of designers willing to employ these or other innovative approaches. Passive solar design principles will play an increasingly important role, particularly in reducing energy needs for cooling through adroit use of thermal mass.

3. Industrial Sector

In the postwar era, declining real prices for electricity have been a mainstay of industrial growth in the Pacific Northwest. However, recent developments have eliminated the prospect of expansion fueled by cheap energy. The region is now experiencing reduced industrial electricity consumption through production cutbacks and business failures. Forecasters and utilities need to recognize what plant managers understand all too well: business as usual, in the form of a return of

Percentage of Buildings Retrofitted for 15% or 40% Savings (based on surviving mid-1982 stock)

	Low Conservation Case		High Conservation Case	
	15% savings	40% savings	15% savings	40% savings
1985	6%	10%	7%	13%
1990	8%	40%	9%	51%
1995	14%	50%	10%	66%
2000	17%	52%	18%	67%

robust growth in electricity consumption, is not an option. The region's industries will cut back on electricity consumption — either through curtailment or through efficiency improvements. The Model Plan seeks to promote the latter course, as the only viable route to expanded production and employment in the industrial sector.

The Model Plan's "high demand scenario" for industry assumes that growth in industrial production will soon resume at the high rates featured in conventional utility forecasts. The "low demand scenario" is based on somewhat lower — and more plausible — growth rates. Both scenarios assume that Northwest industries will take advantage of some — but by no means all — opportunities for increasing the efficiency of four major processes: mechanical drive, production of process heat, electrolysis, and lighting. Together, these broad end use categories account for almost all of the industrial sector's electricity consumption.

In addition to process efficiency improvements, we assume that Northwest industries will expand substantially their use of waste heat for the production of electricity, through cogeneration. The Model Plan derives its estimate of cogeneration potential from a recent regional survey commissioned by the Bonneville Power Administration (BPA).

The results of the analysis are highly encouraging. **The industrial sector can maintain the highest twenty-year growth rates envisioned in the most optimistic current utility forecasts and still reduce total electricity needs by 14%, compared with 1980 levels.** The measures needed to sustain these efficiency increases all pass the cost-effectiveness test outlined in the Model Plan.

4. Irrigation Sector

The Model Plan's irrigation sector analysis is based on a comprehensive study prepared recently for the Bonneville Power Administration.[4] That study identifies extensive cost-effective opportunities for improving the efficiency of water application and pumping, and describes likely changes in crop patterns and irrigation systems. It also provides a basis for projecting future increases in acreage under irrigation, which affect electricity consumption in two ways. Such increases lead to withdrawals of additional river water, which otherwise could be used to generate electricity, and boost electricity consumption for irrigation itself.

The Model Plan presents "high" and "low" demand scenarios for irrigation, based on differing assumptions about implementation rates for conservation and growth in irrigated acreage.[5] Thanks to extensive efficiency improvements, electricity needs under even the high demand scenario constitute a 17% reduction from levels recorded in 1980; the low demand scenario produces a 30% reduction.

The expansions in irrigated acreage constitute our best estimate of "business as usual," if current subsidies and other policies encouraging new irrigation are retained. However, because these expansions would cost the hydropower system dearly (up to 197 average megawatts in the year 2000), the region may well want to adopt policies that would stem growth in irrigated acreage. We will return to this option in the next section.

C. The Regional Council's Model Conservation Standards

The Model Plan's recommendation for utility-financed incentives and regulatory reform should find a powerfull ally in the Northwest Power Planning Council. The Regional Act charges the Council with developing "model conservation standards" by April of 1983; these standards **must** "include, but not be limited to, standards applicable to (A) new and existing structures, (B) utility, customer, and governmental conservation programs, and (C) other consumer actions for achieving conservation." Moreover, the standards "shall be designed to produce all power savings that are cost-effective for the region and economically feasible for consumers, taking into account financial assistance made available to consumers [by the Bonneville Power Administration]." Every regulation, code, and financial incentive program mentioned in the earlier part of this section is a strong candidate for Council adoption, pursuant to these statutory requirements. These include:

1. Residential and commercial building codes, and accompanying utility financing;
2. Utility-financed audit and retrofit programs for existing residential and commercial buildings;
3. Lighting codes for existing commercial buildings;
4. Utility investments in cost-effective process efficiency improvements and cogeneration in the industrial sector; and
5. Regulatory and incentive programs targeted at low-income consumers (see Section IV below).

Jurisdictions that fail to adopt the Council's recommendations will face substantial rate penalties. In addition, the Council will be developing estimates regarding the amount of energy that BPA should plan to acquire from renewable resources.

These regulatory and financial incentives constitute an indispensable part of a sound regional energy program. Rate increases (price signals) by themselves are an inequitable and inefficient spur to development of Model Plan measures, because those most adversely affected are least able to respond without assistance. As noted above and in Section VII below, the Plan recommends a diversity of approaches emphasizing education, audits, improved price signals, and incentives/regulations working in tandem. To the extent practiable, audits and incentives should be offered in **advance** of new price signals, to minimize hardship for those most vulnerable to rate increases.

In sum, a key goal of the Model Plan is to provide

Coalition members and others with a comprehensive set of proposals to put before the Council during a series of region-wide hearings that will precede enactment of model conservation standards. If the Council is receptive, its actions will help ensure that the benefits of the Model Plan are fully realized.

II. Avoiding Unnecessary Thermal Development

One of the Coalition's objectives in preparing the Model Plan was to determine whether new nuclear or coal-fired power plants would be required to meet the Northwest's energy needs over the next two decades, if vigorous efforts were made to increase the efficiency of electricity use and utilize cost-effective renewable energy resources. We conclude that no new thermal plants are needed; indeed, under the Model Plan, it would be possible to defer at least five plants that are now under construction.

This section summarizes our forecast of regional electricity needs through the year 2000 if the Model Plan is implemented. To reflect uncertainties about future policy decisions and regional growth, the forecast is expressed as a range, reflecting both "high demand" and "low demand" estimates. The "high" scenario assumes that policy decisions and economic trends produce somewhat smaller efficiency increases, less rapid "penetration" of conservation measures, and higher industrial growth, compared with the "low" scenario. Regional requirements under the Model Plan are compared in Table 1 with those predicted in three other recent studies: the official forecast of the Pacific Northwest Utilities Conference Committee (PNUCC); the Washington State University (WSU) forecast, which was commissioned by the state legislature in 1981; and the draft forecast published in April 1982 by the Bonneville Power Administration (BPA). The "high demand" scenario in the Model Plan projects electricity needs for 1990 that are 15%, 21%, and 35% below the lowest WSU estimate, the BPA estimate, and the PNUCC estimate, respectively. Comparable figures for the "low demand" scenario are 23%, 28%, and 41%. The discrepancies are attributable primarily to the Model Plan's greater emphasis on cost-effective ways to reduce electricity needs.[6]

Table 2 compares energy requirements under the Model Plan's "high demand" forecast with energy resources available to the Northwest now and in the future. Generous margins of safety result, despite the following assumptions:

- Every year of the forecast is part of a "critical water" period in which droughts drastically reduce hydropower availability;
- only three of the eight large-scale plants now under construction in the region are completed (Valmy Unit 2, Colstrip Unit 3, and WPPSS Unit 2);
- the two nuclear plants in operation during most of the forecast period, Trojan and WPPSS Unit 2, produce only 56% of their rated capacity (PNUCC assumes 71% and 75% capacity factors, respectively)
- Colstrip Unit 3 operates at only 64% of its rated capacity (PNUCC assumes a 75% capacity factor); and
- PNUCC's assumptions regarding the future energy contribution of the hydropower system are reduced by 900 average megawatts to allow increased fish protection (with a net loss of 600 average megawatts, as explained in section VI below).

In other words, under the Model Plan the following thermal plants could be deferred indefinitely without creating a danger of electricity shortages:

1. Colstrip Unit 4 (Coal, Montana)
2. Creston Unit 1 (Coal, Washington)
3. Creston Unit 2 (Coal, Washington)
4. Creston Unit 3 (Coal, Washington)
5. Creston Unit 4 (Coal, Washington)
6. WPPSS Unit 1 (Nuclear, Washington)
7. WPPSS Unit 3 (Nuclear, Washington)
8. WPPSS Unit 4 (Nuclear, Washington)
9. WPPSS Unit 5 (Nuclear, Washington)
10. Pebble Springs Unit 1 (Nuclear, Oregon)
11. Pebble Springs Unit 2 (Nuclear, Oregon)
12. Skagit/Hanford Unit 1 (Nuclear, Washington)
13. Skagit/Hanford Unit 2 (Nuclear, Washington)

The Model Plan also identifies a number of options, preferable to thermal plants on cost, reliability, and flexibility grounds, which provide an additional margin of safety in case demand growth outstrips expectations or the region must prematurely retire some of its coal, nuclear, or hydro plants. These include:

- **Wind-generated electricity:** The Model Plan provide a survey of cost-effective, environmentally acceptable wind energy potential, which reaches 170 average megawatts by 1990 and 984 average megawatts by the year 2000. Wind units lend themselves well to a flexible power planning strategy, since they can be aded to the system in small increments (unit sizes range from 50 kilowatts or less to 6 megawatts) and require only one to two years for site preparation and installation.
- **Electricity surcharges or "curtailment purchases" in times of threatened supply insufficiency:** The Northwest Power Planning Council has expressed considerable interest in readjusting economic incentives to minimize disruptions in response to unexpected supply insufficiencies. Rather than paying to stockpile expensive power plant capacity to meet such emergencies, ratepayers would benefit from less costly alternatives that include temporary surcharges and "buy-backs" of electricty from large industries, in the event that appeals for voluntary short-term cutbacks are insufficient.
- **Environmentally acceptable small-scale hydropower projects:** Unfortunately, the current

stage of interest in "small hydro" projects has produced many proposals that could seriously harm the region's fish and wildlife resources. However, such damage can be minimized where facilities are installed at existing dams and irrigation systems. If properly managed and site, these resources offer an additional alternative to thermal power for meeting future electrical energy needs in the Northwest.

• **Geothermal district heating:** Both Klamath Falls, Oregon and Boise, Idaho now make direct use of hot water geothermal resources. Applications include pavement de-icing and heating of residential and industrial buildings, commercial buildings, and pools. Many other communities may be able to take advantage of the Northwest's ample endowment of low temperature geothermal resources, for district heating and other purposes.

• **Financial incentives to prevent net growth in irrigated acreage:** If irrigated acreage can be stabilized at current levels, instead of growing as the Model Plan assumes, up to 200 average megawatts could be restored to the Northwest's hydropower system by the year 2000. Our preliminary calculations indicate that irrigation subsidies so distort the market that the region could actually save money by **buying** land targeted for irrigation, instead of replacing the electricity generation lost through additional water withdrawals. Less expensive strategies almost certainly can be found for correcting the skewed incentives that create this anomalous situation.

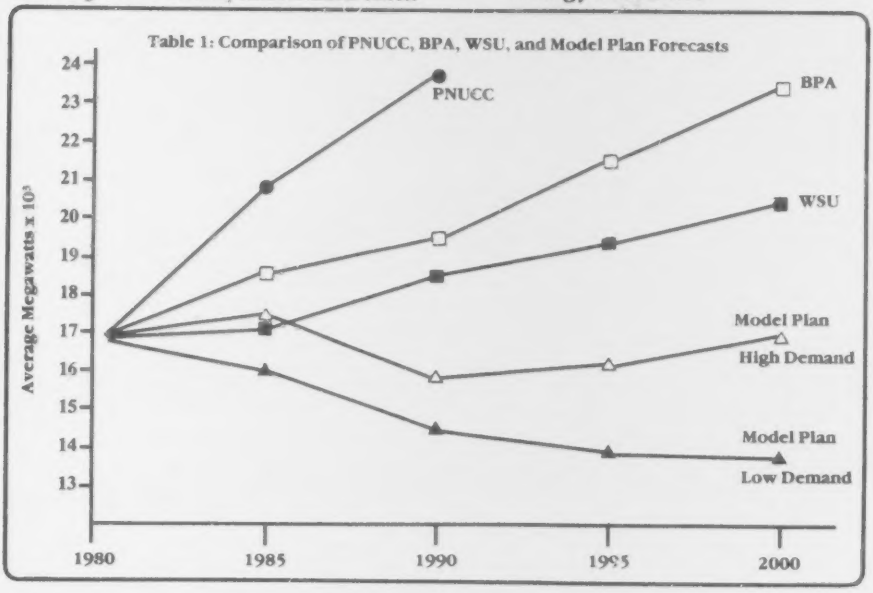
• **Photovoltaics:** At some point within the period of the forecast, electricity from photovoltaic cells probably will become less expensive than the output of new coal and nuclear plants in at least some areas of the region. Quantifying this potential is difficult at present, but photovoltaics can be expected to make a significant contribution in decentralized agricultural and residential applications.

These options, and the other Model Plan measures, permit far more flexible power planning than large scale thermal power plants with ten to fourteen year lead-times. As a report recently prepared for the Northwest Power Planning Council observed:[8]

> When comparing projects that are **equally costly** to the region, those available on short notice should be given priority over those with long lead-times; small projects should be preferred to large ones, and programs that can be slowed, halted or reversed should be more useful than those entailing inflexible commitments.

III. Optimizing Regional Economic Development Through the Promotion of Labor-Intensive Energy Resources

Table 1: Comparison of PNUCC, BPA, WSU, and Model Plan Forecasts



	PNUCC[a]	BPA[b]	WSU[c]	Model Plan: High Demand Scenario	Model Plan: Low Demand Scenario
1985	20,765	18,120	17,120	17,300	15,700
1990	23,834	19,624	18,410	15,600	14,100
1995	not available	21,350	19,510	16,100	13,600
2000	not available	23,333	20,490	16,800	13,400

a. From Pacific Northwest Utilities Conference Committee, **Northwest Regional Forecast of Power Loads and Resources: July 1981 - June 1992.**
b. From Bonneville Power Administration, **Forecasts of Electricity Consumption in the Pacific Northwest** (April 1982).
c. From Washington Energy Research Center/Washington State University, Final Report to the Washington State Legislature, **Independent Review of WNP-4 and 5** (1982) (Table A-15) (Projected loads, assuming termination of WPPSS Units 4 and 5, "moderate demand growth," and "moderate conservation and renewables").

The Northwest's grim unemployment statistics afford one of the strongest reasons for supporting the Model Plan. Coal and nuclear plants cost the regional economy dearly in terms of job creation, by siphoning funds from more job-intensive uses both within and outside the energy sector. The Model Plan, by contrast, would (1) produce more jobs per dollar invested in energy services than the thermal power alternative and (2) free up billions of dollars for use in sectors that are more job-intensive than power plant construction.

Several findings from recent studies dramatize these points. A 1981 report to the Washington Environmental Council identified the utility industry as one of the economy's least promising in terms of jobs produced per dolalr of investment.[9] Compared with an average job-creation cost for the entire manufacturing sector of $18,000 per employee (in 1977 dollars), an investment of $105,000 is needed to create a new job in the public utility sector. Thus, "money saved on energy is almost certain to create more jobs when it is invested in other parts of the economy."[10]

By the same token, a dollar used within the energy

Table 2: Comparison of Projected Loads and Resources Under the Model Plan

(In Average Megawatts)

(All resource estimates are taken from Pacific Northwest Utilities Conference Committee, Northwest Regional Forecast of Power Loads and Resources (1981).)

1980		1985		1990		1995		2000	
Loads	Resources	Loads	Resources	Loads	Resources	Loads	Resources	Loads	
17200	17595[a]	15700 to 17300	17878[b]	14100 to 15600	17335[c]	13600 to 16100	17285[c]	13400 to 16800	17238[c]
Reserve in future years under the High Demand Scenario:		578		1735		1185		438	

a. Reflects resources available in a "critical water" (drought) year.
b. Reflects resources available in a critical water year; assumes retirement of Hanford N-Reactor and operation of Valmy Unit 2, Colstrip Unit 3, and WPPSS Unit 2. Hydropower contributions have been reduced for fish protection and irrigation, as explained in the text.
c. Same assumptions as note b. except that contributions from combustion turbines are reduced 50% (adopting PNUCC's assumption).

sector for conservation and solar applications will yield more labor years than a dollar diverted to a new large-scale power plant. In fact, the ratio is almost three to one, according to New York's Council on Economic Priorities." Additional features of the tradeoff are described in the WEC report:

> Jobs in conservation and solar will have a more decentralized character than jobs produced by power plant construction. While the manufacturing of components will probably pass largely into the hands of large corporations, the construction and installation of conservation/solar technologies will be done almost entirely by small neighborhood firms. In contrast, mining and power plant construction often require workers to move to remote job sites.

Finally, through the efficiency improvements that will enable Northwest industries to compete more successfully in national markets (see section I above), the Model Plan provides a way to reverse current trends toward plant shut-downs and production cuthacks. Model Plan measures also offer local governments a way to reduce energy costs substantially without cutting back other function, which will help preserve jobs and essential public services.

The Coalition staff is now working to quantify the various employment-related benefits that would emerge under the Model Plan. What bears emphasis here is that those benefits are threatened by any move to expand the Northwest's inventory of thermal power plants. The dollar drain for plants already under construction reached unprecedented levels in 1981, and five of the investor-owned utilities serving the region **each** intend to spend more than $300 million for construction during 1982.[12] Over the same period, the Washington Public Power Supply System plans to borrow at least $1.4 billion, of which $850 million is already committed. These are ominous trends for anyone seeking ways to put an end to rising unemployment in the Pacific Northwest; the Model Plan offers an urgently needed change of course.

IV. Assuring that the Financial Assistance and Local Development Provisions of the Act are Made Available on an Accelerated Basis to Those Most in Need of Such Provisions

The percentage of household budgets that low-income families must allocate to energy is up to three times what middle-income families pay. Conservation and renewable energy measures offer a way to cut these increasingly unmanageable utility bills dramatically, but neither the "free market" nor conventional incentive programs will speed these measures to those who need them most urgently. The indigent suffer under a dual handicap: they lack funds to invest even in partially-subsidized measures with substantial initial costs, and they live disproportionately in rental housing, whose owners control decisions on whether retrofits should be undertaken. The Model Plan offers a comprehensive response to these barriers, involving new regulatory and financial inducements coupled with aggressive outreach and marketing programs. Key recommendations include:

- Phased-in, mandatory weatherization of rental housing, drawing on precedents already established in Portland, Seattle, Eugene, and elsewhere. The Bonneville Power Administration, acting through the region's utilities, would provide financing calculated to ensure that no building owner was asked to shoulder costs disproportionate to benefits realized upon sale of the weathered units. **Criminal penalties would play no part in the enforcement process,** which would center on preventing sales of unweathered units until funds had been deposited in an escrow account to meet the seller's share of retrofit costs. Alternatively, owners who failed to comply within a specified period could simply be required to pay the extra electricity costs they were imposing on their tenants and on the region.

- Substantial expansion of existing financial and rate incentives for adopting the Model Plan measures described in Section I above, to help ensure that no family is denied the opportunity to retrofit its residence for lack of funds. These incentives would be structured to ensure that no family's monthly costs for financing a retrofit **and** paying subsequent utility bills would exceed current utility bills.

- For families near or below the Federal Poverty Guidelines (less than $10,000 for a family of four), a prerequisite for participation is Bonneville's agreement to pay 100% of the costs. From a regional standpoint, these payments are not "handouts," but purchases of a cost-effective energy resource. Accordingly, a number of Northwest Conservation Act Coalition members already are working to establish a BPA-funded program using the federal low-income weatherization delivery system of state governments and Community Action Agencies. Prompt BPA action is urgently needed; direct federal support for low-income weatherization was cut 50% in fiscal year 1982, and is slated for still further reductions in FY 1983.

- In general, aggressive outreach — including door-to-door solicitation and neighborhood-based demonstrations — is essential to build the broadest possible base of participation in the Model Plan's residential programs. Media advertisements and mass mailings are not sufficient. A recent Pacific Power & Light proposal for a path-breaking demonstration program in Hood River, Oregon — designed to "assess the degree to which the universal weatherization of a community's structural stock can be achieved"[13] — is built around a door-to-door marketing effort.

Some utility officials have expressed resistance to the concept of special incentives for low-income participation, arguing the Bonneville "is not a social welfare agency." But it is precisely because Bonneville **is** an agency charged with acquiring all cost-effective conservation that it should be concerned about targeting financial assistance at the indigent. The region has at least 100,000 unweatherized electrically-heated, low-income residences.[14] As of May 1982, Bonneville was prepared to offer the occupants no more than **partial** financing for some of the residential measures identified in the Model Plan. Without a significantly expanded commitment, BPA will be abandoning a substantial, cost-effective conservation resource that is waiting to be extracted from low-income households. The agency will then have to spend still more money on higher-cost resources, which will worsen the plight of indigent and middle income ratepayers alike. BPA does not need to become a social welfare agency in order to reject this fiscally imprudent course.

V. Promoting Equitable and Resource-Conservative Rate Structures

In order to remove significant barriers to the development of cost-effective conservation and decentralized renewable resources, the Model Plan proposes numerous changes in current electric rate design policies. Virtually all of these policies have been adopted by at least one electric utility in the Pacific Northwest, but no utility has fully implemented the overall program we propose.

Rates should encourage people to use additional electricity only when the value of doing so exceeds the cost of generating the necessary kilowatt-hours. Economists generally agree that this goal is best served when goods are sold at a price equal to the marginal cost — the cost of producing the last unit of goods. In theory, a consumer's willingness to buy at that price justifies the allocation of resources needed to produce additional units. But utility rates typically reflect only the average cost of all electricity produced. This has the effect of temporarily disguising the high cost of adding new supplies to the existing base, which is dominated in the Northwest by relatively inexpensive electricity from hydroelectric dams.

While consumers benefits from average cost pricing at the outset, it quickly takes a substantial toll on family and business budgets. Distorted prices lead inexorably to an unnecessarily expensive electrical energy system, as increased demand spurred by deceptively low prices leads utilities to develop costly new sources of supply. The WPPSS fiasco provides a classic illustration of this problem.

In recent years, a number of remedial proposals have surfaced. One innovative approach, suggested by the Pacific Power and Light Comapny during rate hearings before the Oregon Public Utility Commissioner, was to increase rates to consumers to the level of marginal costs, with state and local governments using the increased revenues to reduce sales, property, and other taxes. Ratepayers as a whole would be no worse off (higher rates are offset by lower taxes), and electricity would be consumed only where cost-effective. However, such a drastic change in electricity prices would harm consumers who have made major investments based upon current conditions. This policy cannot be considered seriously unless mechanisms are found for assisting such consumers in altering their usage patterns.

The Model Plan proposes a number of less radical changes in rate design, which are all candidates for adoption by the Regional Council as model conservation standards. Alterations are needed at both the wholesale (BPA) and retail (utility) levels, in order to signal to consumers the actual costs and benefits they impose on the region through decisions to use more less electricity. These proposals call for redesign of rates, involving offsetting increases and decreases in particular rate schedules, to improve the reward system that electricity bills create.

At the wholesale level, the Model Plan calls for eliminating "demand charges," which serve no useful function in the region's mixed hydro-thermal system and provide unjustified benefits to certain large industrial customers. Also, for electricity used to serve residential sector needs, "tiered" wholesale rates are recommended. These rates would encourage utility and consumer investment in cost-effective solar and conservation measures, by increasing the rewards earned through reduced consumption. Finally, although wholesale rate discounts for utilities with low system densities would be retained, they would be delivered differently. Current policies have caused utilities qualifying for the discount to set retail rates and service charges that reward electricity waste, and do not ensure that the benefits of the discount are shared equitably among rural consumers — whose unusually high distribution costs provide the justification for granting the discount in the first place. To correct these problems, the Model Plan would substitute uniform **per-consumer** discounts for the percentage discounts **per-kilowatt-hour of sales** that BPA now awards.

At the retail level, the Model Plan envisions seasonal shifts in pricing, to reflect differences in costs of providing electrictity during peak and slack demand periods, and the elimination of service charges. Residential rates would be tiered, for the reasons explained above, and would guarantee each customer a supply of low-cost electricity sufficient to meet essential needs. Existing electric heat customers would receive a larger low-cost allowance than those who heated with oil or gas. As a result, low-consumption households — which include disproportionate numbers of indigent families — would pay significantly reduced rates. Rates for large commercial and industrial customers would incorporate interruptibele and time-of-day features.

Utilities that elected to go beyond the model conservation standards would qualify for BPA pay-

ments, in the form of "billing credits," for the additional energy saved as a result. The Model Plan provides examples of innovative rate designs that could meet this test, such as tiered retail rates for industrial and commercial consumers.

Finally, the Model Plan recommends that all costs of BPA conservation programs should be recovered through the agency's rates, and that all BPA customers that realize benefits from these programs should help defray their costs. Efforts to recover part of the costs of these programs through direct fees to participants, or to exempt some beneficiaries — such as large industrial consumers — from rate impacts, are inconsistent with both the Model Plan and the Regional Act.

If the recommendations of this section are adopted, many of the economic obstacles to cost-effective conservation and solar applications will disappear. Of course, other barriers will remain; experience elsewhere in the United States indicates that even extremely high electricity rates do not guarantee rapid implementation of cost-effective conservation and solar measures. Thus, in addition to rate reform, the Model Plan calls for regulatory action (see sections I and IV above), mechanisms to help consumers and businesses obtain initial financing for Model Plan measures (see section VII below), and special programs targeted at low income ratepayers (see section IV above). However, more equitable and resource-conservative rates clearly will play an important role in delivering the economic and environmental benefits of the Model Plan, by encouraging individual consumers and businesses to take responsibility for careful management of the region's electricity resources.

VI. Protecting the Natural Environment, Including the Fish and Wildlife Resources of the Region

The Model Plan advances this goal in several significant ways. Most obviously, it avoids the many severe environmental consequences that inevitably would attend construction of new coal and nuclear plants. Such facilities would bring, among other things, increased contamination of the air and impairment of visibility in both urban and rural areas of Idaho, Montana, Oregon, and Washington, caused by the emission of hazardous particulates and gasses from coal-fired power plants; possible serious loss of aquatic life because of thermal and chemical pollution from nuclear power plants; increased fish mortality, decreased recreational safety, and disruption of commerce on the Columbia River due to increased use of hydro-generators for peaking power; increased risks of a catastrophic accident and routine release of hazardous radioactive materials at nuclear power plants and their supporting facilities; disruption of wildlife habitat and removal of thousands of acres of land from agricultural and recreational uses during and after the construction of transmission lines; and destruction of thousands of acres of other agricultural, grazing, and recreational lands by the surface mining of coal and uranium. Of course, the Model Plan's measures have environmental implications too, not all of them negligible. However, the Plan demonstrates that the negative impacts of its recommendations would be substantially less severe than those of the power plants that the recommendations would displace. Also addressed are mitigation measures for conservation (**e.g.**, measures to ensure high indoor air quality) and renewables (**e.g.**, siting plans for wind machines that minimize adverse aesthetic impacts).

The Model Plan also assumes regulation of the hydroelectric system to enhance fish migration and provide maximum protection for fish and wildlife resources. Downstream migration of juvenile salmon requires high river flows during the months of April, May, and June; hydropower facilities currently are operated to maximize power production (and hence river flows) during the peak demand months of December, January, and February. There is extensive debate among fisheries agencies and advocacy groups concerning the amount of hydroelectric generation that must be foregone in order to ensure adequate spring river flows. The Model Plan doubles the 450 average megawatt estimate of the National Marine Fisheries Service, which has been criticized widely as inadequate. We then assume, conservatively, that one-third of the resulting 900 average megawatts of "shifted" hydropower can be recouped through mutually beneficial exchange agreements with California. Other analysts sensitive to the problem believe that the resulting estimate of net energy losses (600 average megawatts) is excessive, but we have decided to opt for a margin of safety.

VII. Maximizing the Use and Development of Community-Based Resources and Structures in Implementing the Act

The Model Plan lays out a path to increased local self-sufficiency and self-determination. It calls upon citizens and businesses to take their electrical energy futures into their own hands, and offers urgently-needed relief to local economies and ratepayers. But no one should assume that these goals will be realized automatically through the implementation of the Regional Act. This section suggests ways that local organizations and individuals can make the Act — and the Model Plan — work for them.

To ensure that utilities, local governments, organizations, and individuals can be effective actors, there should be a major emphasis on education and infrastructure development. It is not enough to offer financial incentives: the Model Plan also provides for education on energy use; on the design and implementation of conservation/renewables measures; and on the urgently needed infrastructure improvements described below.

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In the past, the Pacific Northwest relied almost exclusively on utilities to produce and market electrical energy services. They developed systems for generating electricity at large-scale power plants, delivering the product to local customers, and convincing those customers to increase consumption steadily. By the late 1970s, this led to a paradoxical situation: utilities had developed a sophisticated marketing system for selling an abundant and inexpensive commodity that was now both oversubscribed and costly. At the same time, efforts by conservation and renewable energy firms to offer alternative ways of meeting electrical energy needs were hampered by pricing and institutional barriers that constituted the legacy of this obsolete system.

The Regional Act marked an overdue recognition that the Northwest's future energy acquisitions must emphasize conservation and direct solar applications. This requires, in turn, a shift of emphasis toward the role of community-based resources and institutions. Acquiring energy through conservation and solar measures is fundamentally different, in concept and application, from earlier approaches based on large-scale generating units. The former strategy is built around millions of widely dispersed decisions and actions; the latter concentrates dollars and centralized management on a relative handful of energy resources. Also, solar and conservation expertise generally has been developed outside the utility sector, by small businesses, architects, engineers, contractors, and developers.

These considerations mean that the delivery systems for conservation and renewable energy systems must rely on local entities outside the traditional utility sector. These delivery systems are not yet in a position to meet the demands contemplated in the Model Plan; remedying that condition is a crucial and immediate priority. For example, despite the rhetorical support that BPA and others have given the measures described in the Model Plan, many small businesses in a position to provide conservation and renewable energy services are currently failing as a result of cash flow problems. Forecasts of the major contributions that such measures can make must be backed by provision for commensurate programs.

In developing strategies for making sure this happens, it is useful to keep in mind that the Act sets up a region-wide competition among towns, cities, and states to develop cost-effective conservation and renewables. Communities that lag behind will find themselves paying part of the costs of programs initiated by communities that forge ahead. Of course, everyone ultimately benefits from this "race," because the resulting actions all work to reduce regional needs for expensive thermal power. But this is a competition in which no district that is solicitous of ratepayer interests can afford to fall far behind.

In all end use sectors — residential, commercial, industrial, and irrigation — implementation of Model Plan measures will require major contributions from diverse community actors and institutions. For example, housing services are delivered through a fairly well-defined "shelter industry" system, which involves consumers, home builders/designers, realtors, appraisers, primary mortgage lenders, and secondary mortgage lenders. Outside this system, various specialized small businesses have sprung up to deliver conservation and solar services to the residential market. To ensure widespread penetration of conservation and solar in the residential sector, the entire shelter industry system — in conjunction with conservation and solar delivery mechanisms — must be "primed." Prerequisites — which apply also to the other end use sectors — include:

(1) **Education** of consumers on the benefits of conservation and solar measures (**e.g.**, by community energy groups and energy extension services[16]);

(2) **Access to capital** for installation of conservation and solar measures (BPA is the Regional Act's primary financing mechanism, as explained below, but innovative approaches for improving and broadening access to these funds are urgently needed. Illustrative proposals appear below); and

(3) **Quality assurance** to ensure that measures perform as predicted (**e.g.**, major training programs for auditors and solar/conservation industry personnel are urgently needed).

Also important is a strengthened role for local government, both in policy formulation (**e.g.**, building codes and development standards) and enforcement (where, among other things, training of building codes inspectors assumes special importance). Local governments also possess many unexploited energy resource options, such as recovery of electricity by conservation in public facilities and encouragement of solar energy development with solar access ordinances. Through these and other means, the Model Plan calls on local government to become a significant supplier of new energy resources.

An obvious question immediately arises as to the availability of financing for these initiatives. Under the Regional Act, BPA becomes a major conduit for funds to back conservation and renewables at the local level. The Act repeatedly emphasizes BPA's obligation to acquire all cost-effective renewable energy resources needed to meet anticipated load growth, and adds still stronger guarantees for conservation: such measures get a 10% "bonus" in cost-effectiveness calculations, and the statute "prohibits BPA from letting up on conservation even if BPA has a power surplus on its hands."[17] BPA funds can reach the local level in at least four ways:

(1) as payments for participation in BPA conservation programs, which already or soon will cover many residential and commercial retrofit measures;

(2) as payments to local banks and lending institutions, enabling them to lower interest rates for loans used by individuals and businesses to finance Model Plan measures;
(3) as outright purchases of the "capability" of conservation measures and renewable energy resources, through which BPA assumes the risk that the measures and resources may not perform as planned;
(4) as "billing credits," or reductions in the BPA wholesale electricity rates paid by utilities, in districts where conservation measures not covered by a BPA program are implemented, or where renewable resources are developed but not offered to BPA as described in item (3) above.

These funding mechanisms create the following illustrative options for implementing the Model Plan at the local level:

- In collaboration with citizens' groups and businesses, local utilities develop plans to finance installation of Model Plan measures by local contractors, and subsequently explore all possible ways to speed installations in residential and commercial buildings (Pacific Power & Light's proposed Hood River project is the best example of that has emerged to date; it includes most of the Model Plan's retrofit measures and calls for a door-to-door marketing campaign). As part of this effort, experienced citizens' groups run a series of workshops covering weatherization, home energy management, renewable energy retrofits, and consumer protection. Note that it does not matter whether individual measures are covered expressly by a BPA conservation program; all Model Plan measures not yet in that category will qualify for billing credits, which BPA must award once savings have been demonstrated.
- Instead of relying exclusively on utilities as conduits for its investments in residential conservation, BPA develops new approaches to work directly with local boards of realtors, local lenders, and local conservation and solar businesses to prime the conservation delivery pump. For example, realtors are given financial incentives to identify homes that are energy-inefficient at times of sale; local conservation businesses, working in conjunction with the realtors, are brought in to retrofit the properties; and the local utilities conduct follow-up inspections to ensure high-quality work.
- Citizens' groups convince their local government to adopt the Model Plan's recommendations for upgrading building codes and eliminating over-lighting in existing commercial buildings. The resulting electricity savings earn billing credits,[18] which are used to defray costs associated with the new regulations and to reduce local utility bills.
- Local business or individuals form a corporation equipped to audit commercial buildings and install Model Plan measures. The corporation sells the energy savings it produces to it local utility, which recoups the purchase price from BPA through conservation program payments and billing credits. Alternatively, the corporation sells BPA the "capability" of its proposed program of efficiency improvements and renewable energy measures; BPA assumes all risks of the enterprise and guarantees payment for projected savings at a mutually agreed price.
- Local solar industries arrange for low interest bank loans to customers installing their products, made possible by BPA payments to the lender.[19]
- A local industrial plant installs efficiency improvements that permit it to maintain production with less electricity. It also discovers that its waste heat could be used, through cost-effective cogeneration, to produce substantial amounts of electricity. BPA pays for the efficiency improvements through billing credits, which are passed through to the plant by its utility. BPA also signs an advance guarantee to purchase the output from the cogeneration unit, lowering financing costs and ensuring a market for the energy.
- Local entities develop plans to build a small-scale, environmentally acceptable renewable energy generating resource. BPA funds the investigation and preconstruction expenses and agrees in advance to pay for anticipated output, ensuring the availability of favorable financing.

In working to ensure that their communities take advantage of these and related opportunities, Northwest citizens will find the Model Plan useful in still another respect: it affords specific targets against which to measure the adequacy of local efforts. Where Model Plan recommendations are omitted or diluted by a proposed utility program or building code, local groups can and should point out that the result is to squander opportunities for additional rate relief — opportunities that other communities are unlikely to ignore. To preempt such problems, and promote its other goals, the Model Plan calls for initiation of county energy planning throughout the Northwest. **County energy plans,** to be developed with the broadest possible community involvement, should focus on present community energy use; conservation and renewable resource potentials; the jobs and capital flow impacts of alternative community-based solutions to energy problems; and — most important — the development of community-wide strategies to meet county conservation and renewable resource goals.

The discussion of BPA's conservation and solar financing requires one significant qualification. BPA takes the position that such financing is tied to the execution of long-term power sales contracts by local utilities. The deadline for signatures is on or about September 1, 1982. Although most Northwest utilities are expected to accept the contracts, few had acted as of May 1982. A utility that lets the deadline pass is saying, in effect, that it intends to meet the long-term electrical energy needs of its customers without help from Bonneville. The response of local groups should be that such utilities must be prepared to replace BPA as the primary financing mechanism for conservation and solar programs in their service territories. Refusals to do

so would provide a strong basis for campaigns opposing efforts by the abdicating utilities to burden ratepayers with new large-scale power plants.

Any utility that is contemplating a coal or nuclear power project should be asked by its ratepayers to answer one highly specific question: **Would the plant be needed to serve the utility's loads if the measures described in the Model Plan were installed throughout the utility's service territory at rates specified in the Plan?** No Northwest utility lacks the capacity to adjust its demand forecasts in response to that questions, and no utility that is leaning toward purchase of all or part of a new coal or nuclear plant is justified in refusing to address the alternatives offered by the Model Plan.

VIII. Ensure the Preservation of Democratically Controlled Local Public Power Systems in the Northwest (i.e., Public Utility Districts, Cooperatives, and Municipals)

Democratically controlled public power systems have an important role to play in the implementation of the Model Plan. This role includes, but is not limited to, assisting in the development of the broadly-based community energy plans described in section VII above, and working with other local groups and institutions to ensure that community conservation and renewable energy goals are realized. The thrust of the Model Plan is toward decentralized strategies for meeting energy needs, guided by public participation; involvement in that effort will both revitalize local utility systems and reaffirm the highest traditions of the public power movement.

One crucial point should be reemphasized in closing: the Model Plan will not succeed without broad support in Northwest communities. Extensive citizen involvement in program development and delivery of services under the Plan is essential to overcome political and institutional barriers that otherwise could delay or defeat the effort. We repeat here a point made at the outset: the ultimate beneficiaries of the Model Plan can and must assume the leading role in its implementation. The primary goal of the materials summarized above is to provide assistance in doing just that.

FOOTNOTES

[1] Although nominally "terminated," these plants are being maintained in a status that will permit construction to resume if the necessary financing arrangements can be made.

[2] Under the Regional Act, conservation measures would have priority over these plants even if their costs per kilowatt-hour saved were up to 10% higher than the figures cited in the text. Pub. L. No. 96-501, § 3(4)(D).

[3] The target for "achievable savings" is substantially less than 100% of the technical potential for retrofits; it assumes nonparticipation rates for each measure ranging from 10-30%, and incorporates an allowance for weatherization already completed.

[4] Norman Whittlesey **et al., Demand for Electricity by Pacific Northwest Irrigated Agriculture** (January 1982).

[5] The two scenarios assume that, by 2005, lands under irrigation will expand by 729,000 acres and 600,500 acres, respectively.

[6] Thus, for example, the BPA forecast does not include "savings which might be achieved through future conservation programs budgeted by BPA, by local and state governments, or by utilities;" also excluded are the effects of building and appliance efficiency "standards which may be proposed by the Northwest Power Planning Council, federal, state or local government, or by public and private utilities."

[7] See, **e.g.,** Natural Resources Defense Council, **Choosing an Electrical Energy Future for the Pacific Northwest: An Alternative Scenario** 104 (1980).

[8] K. Lee, "The Path Along the Ridge: Regional Planning in the Face of Uncertainty," at p. 5 (March 1982).

[9] D. Smolewicz, "Energy and Jobs," May/June 1981 **Solar Washington.**

[10] **Id.**

[11] Council on Economic Priorities, **Jobs and Energy,** at p. 12 (1979). See also Mid-Peninsula Conversion Project, **Creating Solar Jobs: Options for Military Workers and Communities** 12 (1978).

[12] "Utilities Will Increase Construction Spending," **Seattle Daily Journal of Commerce,** March 11, 1981.

[13] Pacific Power & Light Co., "The Hood River Pilot Conservation Project," at 17 (February 24, 1982).

[14] Figures compiled by Spokane Legal Services Center in attachment to January 26, 1982 letter from James A. Bamberger to Steve Hickok.

[15] See, **e.g.,** Romer Associates, **Northwest Electric Load Shaping for Fish Enhancement** (November 9, 1981).

[16] The marketing agent for conservation programs must be credible (expert and trustworthy) in the eyes of the public. Several studies document, and rapidly rising rates will exacerbate, the credibility problems that traditional energy suppliers face in marketing conservation. Consumer-oriented, community-based organizations must play a substantially enhanced role in order to market conservation programs effectively.

[17] Eric Redman, "The Northwest Regional Power Act: Conservation and Resource Opportunities for Municipalities," at p. 7 (1981). See Pub. L. No. 96-501, Sections 5(4)(D) & 6(b)(5).

[18] Billing credits would be earned until, and unless, the Regional Council called for equally stringent codes in its "model conservation standards"; after that date, the local code would still yield substantial rate benefits, by shielding residents from surcharges prescribed in the Regional Act.

[19] BPA has not yet established such a program, but the agency and the Regional Council are giving the option serious consideration.

Senator MELCHER. Thank you. Ed Coffman?

STATEMENT OF ED COFFMAN, CLARK FORK PROTECTIVE ASSOCIATION, MISSOULA, MONT.

Mr. COFFMAN. I want to thank the subcommittee for allowing me to testify today. My name is Ed Coffman and today I make my comments on behalf of the Northern Plains Resource Council and its Missoula area affiliate, the Clark Fork Basin Protective Association.

CFBPA represents people from the Missoula area, including residents of Miller Creek and Rattlesnake neighborhoods. We demand that if these lines are built through the Rattlesnake or Miller Creek areas, they must be buried for the following reasons.

There is growing evidence that powerlines of this type can cause serious health effects. For the last couple of years, we have been pointing this evidence out to BPA, but they have summarily dismissed it. Recently, however, a laboratory that traditionally supported BPA's rhetoric has come out with a report that shows there are definite biological effects from these types of lines. I'm speaking of the Battelle Laboratories and I have enclosed articles that follow the release of that report.

Various studies have shown the following symptoms in animals and humans exposed to electromagnetic fields similar to the ones that people living near these lines would experience. One is the effect on the immune systems, birth defects, and higher incidence of leukemia, nervous disorders, suicide, and mental depression.

Studies by Batelle, University of Colorado, Syracuse University, in Russia, England, and many others have shown these systems. A burial of these lines in developed or developing residential areas like Miller Creek or the Rattlesnake is the only acceptable way to mitigate those health impacts. We refuse to be laboratory animals in this experiment.

If these are built through the Missoula area, they will create the greatest esthetic visual impact of anywhere along the route. If built through Miller Creek, 320 families in Miller Creek and Rodeo Ranchettes as well as 11,000 daily users of Highway 93 near Lolo will be directly affected. If built in the Rattlesnake, a whole residential section of town will be directly affected. Either location will have impacts on many other areas of the valley.

Burial of lines will greatly reduce the visual and esthetic impacts that these lines will have on the Missoula area. For instance, if the lines were buried for the 4.5 miles in Miller Creek that the draft EIS dealt with, some 22 towers would be replaced by 2 40-foot terminals. Clearly, burial of the lines will mitigate virtually all of the visual impacts on the surrounding areas.

Dealing with property values, the overhead lines will greatly reduce our property values. Burial is the only way to mitigate this impact.

Regarding the feasibility of the burial, burial of these power lines is definitely feasible. I will try and summarize BPA's draft EIS supplement on burial and the impacts that it would have. Land use, minor impacts, esthetic, would be equivalent to any pipe-laying project. Human health and safety, zero electric field, one-quarter to one-half the gaseous magnetic field and no corona effect. Water quality, minimal

during operation of the line. Cable oil spills unlikely, and if one occurred, little fluid would leak—that's out of page 7 of the DEIS supplement. Terrestrial ecology, insignificant or temporary impacts, and geotechnical impacts unlikely and insignificant. Clearly all these areas show equal or lesser impacts from undergrounding of these lines than from overhead lines. Esthetic and health impacts are especially greater for overhead lines.

Our testimony on need for electricity in the region shows that there is plenty of time to build these lines correctly, if they are to be built at all. That means undergrounding through the areas in Miller Creek or in the Rattlesnake.

Although it is true that the repair of buried lines could be more time-consuming than overhead repairs, page II–32 of Bonneville's DEIS reports that the operating history of previously undergrounded lines has generally been good. Thus, reliability does not seem to be a real problem. In addition, it is our understanding that this system will be built so that there is always a backup should one of the conductors fail.

The cost has generally been the main reason that BPA gives for not wanting the lines buried. However, our calculations show that if the cost of burial is borne by those who would pay for the impacts that these lines are causing, that is, who will consume the electricity, the price is actually minimal.

For instance, if the cost for buying the line for the 4.5 miles through Miller Creek as the DEIS supplement outlines, and I would stress only those receiving the power from Colstrip, MPC, PGE, PP&L, WWD and Pugett Power, each customer would have to pay approximately 41 cents per year for the economic life of the project. We erroneously testified that the cost would be $1.50 per customer per year at BPA hearings during the spring because we assumed the wrong rate of interest that BPA must pay to borrow money. Our assumptions for the 41-cent per customer per year figure are: One, a 37-year economic impact lift of the project; two, $29 million additional spent to bury the lines in Miller Creek or the Rattlesnake. Three, 4 million customers in the Colstrip consortium in the service areas, and No. 4, BPA borrowing at the rate of 4.5-percent rate of interest in Federal Treasury.

We feel that 41 cents per year is very little to ask of users of the lines to pay for the severe health, aesthetic, and economic impacts this line will have on the people of Miller Creek or the Rattlesnake. We demand that they be buried or not built at all. We ask your help or the help of this committee to see that it is done.

[The attachments to Mr. Coffman's statement follow:]

Clark Fork Basin Protective Assoc. testimony.

UNDERGROUNDING: THE REAL COST OF ENERGY

The C.F.B.P.A. disagrees with the statement on Page II-32, paragraph 1 of the D.E.I.S. in reference to undergrounding the 500 KV lines in either Miller Creek or the Rattlesnake. That paragraph reads in part: "The trade-offs for reduced social and esthetic effects involve greatly higher costs and technical feasibility problems due to geological stability problems." The general impression given on Pages II-32 & 33 is that undergrounding the lines is not feasible. We believe that it is not only feasible, but that it is manditory for the lines to be undergrounded if they pass through high impact areas near Missoula such as Miller Creek or the Rattlesnake.

One of our ongoing problems with the B.P.A. has been the low priority they put on negative human impact these lines will have, ie. social, environmental and long term health effects. In the case of both Miller Creek or the Rattlesnake, these impacts far outweigh the cost or technical problems. We are going to suffer the costs of shipping electricity to the West Coast. Those costs are real.

Appendix E of the D.E.I.S. rebuts most of the concerns on Pages II-32 & 33 of the D.E.I.S. The appendix states that undergrounding reduces health and safety effects (page 5,

paragraph 3) and drastically reduces the visual impacts of the line plus states that most negative impacts of undergrounding are temporary. We believe that temporary impacts are preferable to the long term visual, esthetic, social and possible health effects of an overhead line in residential areas. So, given the findings of their own D.E.I.S. in Appendix E, why does the B.P.A. not wish to underground? The reasons are given: 1) reliability and 2) cost. On Page II-32 of the D.E.I.S., paragraph 2, the report describes the reliability of previously undergrounded lines as follows, and I quote: "the operating history has generally been good." Thus reliability does not seem to be a real problem.

Let's look At Cost.

Undergrounding the line would cost approximately $29,000,000 more than overhead lines. This is certainly a lot of money. However, if each B.P.A. residential customer paid for it over the life of the project, it would cost about ~~$1.50 per~~ customer per year. (This includes ~~12½%~~ 4.50% interest per year paid over the life of the project: 37 years). This is not an excessive amount. Compared to the billions of dollars wasted in the W.P.P.S.S. fiascow or the approximately 1½ million dollars per year of lost tax revenue in Missoula County alone, which B.P.A. refuses to pay, The cost of saving the integrity of our valley is a small one. ~~$1.50~~ $1/yr

Whether it's acid rain, air pollution or disposal of nuclear

waste, we must never again be fooled or fool ourselves about the true cost of energy. Consumers must be made aware each month in their bills, what the real costs are. With overhead lines, we in Missoula valley will pay a tremendous price so that cheap energy will get to the West Coast.

What we are saying is that if you come through this valley, we are not going to pay that whole price; we will not let you sacrifice the beauty and human environmental integrity of our valley for cheaper power in King County. If you come near people, put it underground!

Study finds biological effects in powerline electrical fields

By KEVIN MILLER
of the Missoulian

"Definite biological effects" have appeared in laboratory animals exposed to electrical fields like those under 500-kilovolt powerlines, one of the heads of a government- and power industry-funded study said Wednesday.

Larry Anderson, a biochemist for Battelle Northwest Laboratories, was interviewed by telephone from his Richland, Wash., office.

He will present a lecture on the biological effects of powerline electric fields at noon Thursday in Science Complex 221, on the south side of the University of Montana campus. The lecture is sponsored by the Northwest College and University Association of Science.

Anderson is assistant director of Battelle's 6-year-old study on the biological effects of powerlines.

He said Battelle's research to date leaves open the possibility that the lines may be harmful to humans. But he cautioned that the study hasn't progressed far enough to suggest that they pose a hazard.

"To a scientist, a biological effect doesn't equal a hazard," he said.

"We see some definite biological effects due to exposure (to electrical fields from the lines). But because we don't know the mechanism that causes the effects, or the ramifications of those effects, we're not at the point where we can say this is hazardous or not hazardous."

Battelle's powerline studies are financed mostly by the Department of Energy, Bonneville's parent agency, and by the Electric Power Research Institute, a utility industry group.

The research project, which Anderson called "by far the most comprehensive" of its kind, uses electric fields "scaled to approximate what a man would experience standing under a 500-kilovolt line."

The project includes several separate studies. One of them has shown that the electrical fields cause "increased excitability" in small laboratory animals, said the researcher.

Exposure to the fields makes the animals' nervous systems more sensitive to stimulation, according to Anderson.

Another study showed an increase in the rate of teratogenesis, or birth defects, in miniature pigs.

"The effects that we've seen (in the two studies) are fairly subtle," added Anderson. However, he said, "it appears sure that they are occurring."

The Bonneville Power Administration wants to build a 500-kilovolt line across central and western Montana. It would carry electricity from the Colstrip power plants to the agency's Pacific Northwest Power grid.

Confirming or discovering the biological effects is only part of the researchers' work, Anderson said.

Their next steps are to determine how long those effects last and whether they are pronounced enough to constitute a hazard.

The goal, he said, is to provide an estimate of how much risk is associated with the powerlines. After that, deciding whether and where to build the lines "is not the scientist's job," but is a political decision, according to Anderson.

He noted that Battelle's researchers might not get to the next steps of the study because of federal budget cuts.

"With what's happening with the funding level, it appears that the study will be cut off this year," he said. "But budgets change from week to week."

Anderson said he'll present more details during his lecture, and that he'll try to discuss the implications of Battelle's findings.

Opinion

Editorial Board: •Tom Brown, Publisher •Rodney J. Deckert, Editor •Sam Reynolds, Opinion Page Editor

Missoulian, Tuesday, May 18, 1982

Powerlines first should be proven safe

Missoulian editorial

It was a quantum jump into the uncertain.

What are the effects of high-voltage powerlines on children and other living creatures?

Nobody knows.

That was the conclusion given last week by Larry Anderson, a biochemist for Battelle Northwest Laboratories. Anderson has been studying the effects of powerline electrical fields on mice and swine, in controlled laboratory tests.

The quantum jump was this: high-voltage powerlines DO have biological effects on laboratory animals. But the laboratory has NOT concluded that the effects are long- or short-lasting, harmful or harmless.

So powerlines might be dangerous to human health or they might not be.

Never before have scientists been able to prove that powerlines have biological effects. It's been suspected, and a lot has been written about it, but hard laboratory evidence has been lacking.

Now they know that biological effects occur. But that quantum jump lands at the edge of a sea of unanswered questions. Anderson said an enormous amount of research must be done to determine whether the electrical fields existing beneath powerlines are dangerous to humans, and if they are, how and to what degree.

This resurrects an old issue that was lively when air and water pollution controls were first debated. Citizen Joe Dokes can't prove that his beloved Aunt Gertrude died before her time due to an environmental hazard. But he suspects that could be the case. Therefore, says he, clean up the dangerous pollution.

But, says the polluter, when proof is lacking, why should we clean up? Are you not finding us guilty based on suspicion rather than fact? That isn't fair!

The answer given by the public during the pollution battles of the 1960s and 1970s was: Yes, it is fair. Even without proof that pollution does such-and-such specific amount of damage, pollution CAN'T be good, and suspicion that it's bad justifies cleaning it up.

Since then, of course, lots of evidence has been compiled that pollution does cause specific harm, including harm to the lungs of Missoula school children.

So what about powerlines? Isn't it reasonable that powerline proponents prove powerline safety BEFORE the powerlines are built, rather than build them and then discover the risks involved, if any?

Powerlines, polluting factories, gravel pits, zoning changes and such matters are not subject to the criminal law principle that they are innocent until proven guilty.

Projects with large impacts on any community face the task of proving they will do no harm as a condition to be built. Witness the pulp mill's expansion, the gravel pit out Mullan Road, the fight over the new proposed development in the Rattlesnake. They must all prove their good citizenship as a condition for receiving permission to exist.

Not the BPA powerlines. They are coming through rootedy-toot. And if research someday proves that they do harm children and other living things, then what will the builders do, say they're sorry?

This is backward. The powerlines should be proven safe before they are permitted to exist. It's the only responsible approach.

-- Sam Reynolds

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Research raises powerline safety questions

By KEVIN MILLER
of the Missoulian

Biochemist Larry Anderson, a powerline health-effects researcher for Battelle Pacific Northwest Laboratories in Richland, Wash., cued up a color slide to start his lecture.

Thursday's audience of about 70 people at the University of Montana saw a group of small children playing soccer in a Seattle-area schoolyard.

"That is of concern," said the scientist, gesturing toward the picture. The smiling children appeared oblivious to the steel towers that soared above them and to the high-voltage transmission lines that sagged over their heads.

"Because there is a question," he added, "Is it safe?"

Maybe it is and maybe it isn't safe to spend much time beneath lines such as those in the slide, Anderson said. The lines are similar to those the Bonneville Power Administration wants to build across Montana to carry electricity from Colstrip power plants to the agency's Pacific Northwest power grid.

Anderson recounted some of Battelle's research on the subject. In clinical terms, he told how two large Battelle studies have shown a definite link between powerline electrical fields and abnormalities in animals' nervous systems, as well as a possible link with birth defects.

The studies employ several scientists and some of the most sophisticated equipment in the world. They are financed not by powerline opponents but by the federal Department of Energy and the Electric Power Research Institute, a utility industry group.

The first trick of the research is to assure that the laboratory electrical fields simulate those a person would experience, Anderson said.

High-voltage powerlines create a field of energy between themselves and the ground. The field is vertically oriented, and a person standing in it becomes a conductor, carrying the electricity down to the ground.

Since people are better conductors of electricity than air, is, energy in the field is actually drawn toward the person. The electrical charge on top of a person's head in a field below a 500-kilovolt line is about 18 times higher than the charge in the air around the person, according to Anderson.

Standing in the energy field also creates a charge inside a person, but the below-skin charge is typically lower than the charge in the surrounding air.

In Battelle's labs, experimental rats and mice lived in specially designed cages and were exposed to electrical fields for 20 hours a day. The other four hours were set aside for taking care of the animals and testing them.

Other groups of animals lived in identical settings and were treated the same as the exposed animals, except that they weren't exposed to electrical fields. Neither the

(Turn to POWERLINE, page 2)

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Defense debate drags on

WASHINGTON (AP) — After nearly five hours of debate, the Senate on Thursday voted against a Pentagon plan to buy 50 Lockheed C-5 cargo planes, opting instead for used freighter versions of the Boeing 747 jetliner.

The action, by voice vote, came as the Senate moved at a snail's pace toward approval of a $177.9 billion defense authorization bill. Leaders said the chamber would stay in session all night if necessary, and cots were set up in a room off the chamber for members to use between votes.

In early evening, senators voted, 63-32, to table — and thus kill — an effort by Sen. Gary Hart, D-Colo., to delete one of two nuclear-powered aircraft carriers from the bill to save $3.65 billion in multi-year spending.

Hart then introduced a second amendment that would use the money earmarked for one of the 93,000-ton nuclear-powered carriers to build two 44,000-ton conventionally powered carriers.

That attempt also was tabled, 72-19.

A measure by Sen. John Glenn, D-Ohio, to scrap the MX missile on the grounds that no basing method has been found for it was tabled, 65-29. Glenn would have diverted the $565 million earmarked for the weapon to research on a new, smaller missile developed with a mobile basing system in mind.

About a dozen other amendments, including measures that also would scrap the B-1 bomber program and ban production of new nerve gas weapons, awaited action.

Earlier Thursday, the Senate took about two hours to dispose of three non-controversial amendments, including a measure asking President Reagan to seek agreement with the NATO allies on greater coordination of their defense industries to avoid duplication of effort.

But the debate bogged down over the type of cargo planes the Air Force should buy.

Sens. Henry M. Jackson, a Democrat, and Slade Gorton, a Republican, whose state of Washington is home to the Boeing Co., led the effort to set aside the purchase of more C-5 planes in favor of the 747.

Facing them in swapping facts and opinions about the relative merits of the two planes were Democrat Sam Nunn and Republican Mack Mattingly of Georgia, where Lockheed produced the current generation of C-5s.

Senators from Missouri and Kansas allied themselves with the Washingtonians in the debate. McDonnell Douglas Corp. of St. Louis has proposed to build an entirely new transport plane known as the C-17, but it also was rejected by the Pentagon in favor of the C-5. The Senate Armed Services Committee, on which Jackson and Nunn both serve, voted to obligate $600 million to buy the first of 50 new C-5s in accordance with the administration's request.

Citing Boeing statistics, Jackson and Gorton said that buying surplus 747s from the nation's financially troubled airlines and converting them to haul military cargo to distant trouble spots would save $6 billion over the long term.

The 747 also can fly longer distances and carry a heavier payload than the C-5, and the 77 C-5s already in the inventory are sufficient, they argued.

From page one

Powerline

(Continued)

people who cared for the animals nor the researchers who tested them knew which ones had been exposed to electrical fields, said Anderson. The humans could not subconsciously compensate for the exposure by treating the exposed animals differently.

The most "robust" results of that study, said Anderson, involved an increased sensitivity in the nervous systems of the exposed animals and a strong effect on their pineal glands.

Research results show that the increased nerve sensitivity stems from a heightened excitability in the synapses. Synapses are where nerve impulses jump from one neuron, or piece of nerve, to another.

The exposed animals also showed abnormalities in the activity of the pineal gland, located at the base of the brain. Sometimes known as the "third eye," the gland remains something of a mystery, but is thought to be the center of an animal's biological clock, Anderson said.

Researchers saw definite abnormalities in pineal gland activity in the exposed animals, especially at night. But they aren't sure what that means, he said.

He said Battelle's research has also shown that bone fractures tend to heal more slowly in exposed animals. He noted that the Battelle studies showed no effects in many other areas of biological activities, including general illness, cardiovascular function or fertility.

He also told how one Battelle study showed an increase in birth defects in pigs exposed to the electrical fields. However, he noted that the study may have been "confounded by a dysentery outbreak in the pig population."

The researchers had to treat the pigs with antibiotics to cure the dysentery, he said. Because there's no way to be sure the drugs didn't have something to do with the birth defects, it's hard to interpret the results.

"There is a potential effect here with birth defects," said Anderson. "That's something that needs to be cleared up, certainly."

Anderson aknowledged after the lecture that it would have been better to do conclusive research on powerline health effects before the high-voltage lines became a fixture in American life. But he said the concerns about safety arose after the lines became commonplace.

"It's kind of an after-the-fact thing," he said. "But it's the best we've got."

Senator MELCHER. Thank you. Do you have any independent data on underground burial other than the comments supplied by Bonneville and the environmental impact statement?

Mr. COFFMAN. We took our estimate on the cost and everything out of the Bonneville information.

Senator MELCHER. It's obviously the correction of points along the route that have great impact if it's overhead and could have been buried.

Mr. COFFMAN. We're not asking for the burial of the whole line, just areas that really affect people.

Senator MELCHER. And the reason to get them out in the forest lands and away from private land is to avoid impact with people. It crosses the Bitterroot at Miller Cooley; it impacts a number of the people you've mentioned here. How many of these people are within a half mile on either side of the line that you referred to?

Mr. COFFMAN. I don't have that information with me, but I can supply it later in testimony.

Senator MELCHER. I think you mentioned 300 and some families, did you not, or 300 and some residences?

Mr. COFFMAN. There are 300 families in the Rodeo Ranchettes area, but how many of those come within a specific distance from the line? Some people up in the Miller Creek have that figured out, but I don't have that with me to give you an accurate statement.

Senator MELCHER. In any event, it is quite a few people.

Mr. COFFMAN. It's a significant amount.

Senator MELCHER. You've attached part of the EIS draft referring to tabs, have you not?

Mr. COFFMAN. Yes, I have.

Senator MELCHER. And that is directly out of the EIS draft or is it just a summary of what's in the draft?

Mr. COFFMAN. Just a summary.

Senator MELCHER. Part of this is remarks of——

Mr. COFFMAN. Yes, we're just submitting that to back up where we got our facts and figures, how we arrived at our conclusions.

Senator MELCHER. We'll pursue with Bonneville anything we can on underground burial, any information we have. Beyond that, we'll ask an electric institute for what data they have, we'll ask anybody. If you've got any suggestions, tell us. We want all the information we can get on that.

Mr. COFFMAN. Anything that we can come up with in addition to what we have, I'll be more than happy to get it to the subcommittee.

Senator MELCHER. That would be very much appreciated. This model that you've included with your testimony tells—you have a date on it?

Mr. BARRETT. I believe it's on the cover. April or May 1982. That's the model plan submitted to the Northwest Power Planning Council.

Senator MELCHER. Who drafted it?

Mr. BARRETT. It's an effort that was put together by the Northwest Conservation Act of Coalition of which Northern Plains Resource Council is a member. It was primarily put together by the Natural Resources Defense Council people in San Francisco.

Senator MELCHER. Did they contact anybody on it, do you know?

Mr. BARRETT. I believe they did most of the work themselves.

Senator MELCHER. Is there any individuals that are indentified somewhere as having past judgment on this, the National Resource Defense Council?

Mr. BARRETT. Well, the model plan has been endorsed by the Northwest Conservation Act Coalition, so they are responsible for its contents.

Senator MELCHER. I just wondered, is there some expert? If the Northwest Resource Defense Council are the ones that did the putting together and assessing the facts, I was just wondering is there somebody we can address questions to directly, whose responsible for-- —

Mr. BARRETT. Probably the best person to contact would be Ralph Cavanaugh.

Senator MELCHER. Where?

Mr. BARRETT. I believe he's in the San Francisco office.

Senator MELCHER. Thank you very much. Anything that you can find on underground burial, please draw it to our attention as quickly as possible. Thank you both very much. Greg Kennett, you're next. From the Huson area.

STATEMENT OF GREGORY KENNETT, BIG HORN PROPERTY OWNERS, HUSON, MONT.

Mr. KENNETT. My name is Greg Kennett and I represent the Big Horn Ranch property owners. The Big Horn Ranch property owners is a small group of landowners along the Clark Fork River just upstream from the confluence of Nine Mile Creek of the Clark Fork River. Subdivision is relatively new and there aren't many homes yet. Unfortunately, most of the prime building sites, at least the ones overlook'; g the river, also look right up where the drainage is which the BPA's Taft Route plans to use as its approach to the river. Powerlines would be highly visible to skyline as it emerges directly in our homes or building sites.

The route then calls for river crossing and I might add that someone pointed out earlier, a necessary crossing if you keep south of the river. It emerges and crosses from private land where another gentleman, who will not let BPA cross his land, goes hill and dale through there hidden through some trees, some it's not. The BPA supplied us with some cross, some engineering drafts as to how much of the towers we would see. It seems that at least five, probably six would be exposed and all of their ugliness or at least partially would be visible from most of our homesites there. There are other issues which we'd like to address and I think the first one is the issue of existing right-of-ways. I believe it's section 503 of the Federa! Land and Policy Management Act that directs the responsible Secretary to use existing corridors where necessary or where feasible we believe, and not wanting to push back on somebody else, that there is an existing right-of-way here and people that live in the area that are impacted knew fully well when they moved to an area that they moved within a half mile or whatever of the power line. If you move next to a power corridor, don't be surprised if power lines are going through.

I believe in the EIS that the number of homes impacted within a half mile is what is indentified as the criteria for selecting one area or another. I believe they should use the number of new homes impacted

within a half mile of an area that that would be a more reasonable criteria to look at in an evaluation of these lines.

Another point we like to address is that in this day there are other exporters of energy, not as the BPA has told us at some of our neighborhood meetings that we are an importer. The Montana DNRC EIS said that we do export energy. Something which someone else brought up earlier is that if there are any new powerplants being proposed for the Colstrip area because of the vast quantities of coal there, I think it's a little late now, but we ought to look into the possibilities of transporting that by rail to areas that want to use that. One reason is, and you said you weren't aware of any testimony, but coal plants are notorious for putting hydrogen sulfide in the air, even low-sulfur coal plants and with the volume of coal that is to be burned there, the likelihood that you would increase acid rains in the bread basket of America and agriculture being a strong point economically, I think warrants quite a bit of investigation.

Another point, work is going on now on a preferred route and I believe it was even the Forest Service people that said the majority of the other two routes, the northern routes, have roads and they don't require the intensity of investigation as this other route does. According to the draft EIS route here, both northern routes were approximately 100 miles of new nonparallel roads and the southern route has approximately 150 miles. I think there is a disproportionate amount of investigation going on in the southern route and I wonder if it's not a foregone conclusion by BPA that it will be the selected route and they're doing the necessary engineering work right now to go ahead to maintain their timeframe.

Route A is lower than total cost, route A will have less line loss, route A is a much lower impact on the Forest Service which is the economic key to western Montana. Route A is also visually superior. Alternative A also shows a higher impact on wildlife despite the fact that A is a longer existing route for half its length. I find that hard to deal with. I work in a national resource capacity and soil erosion is a concern of mine. The draft environmental impact statement, they had some erosion susceptibility maps. These do not coincide with other erosion susceptibility maps or soil maps done by Federal agencies that supposedly have the technical expertise to map soils in Montana and all over the country. The same is true of mass movements, the geological sections are technically incorrect. Arena documented in the existing geologic literature is very susceptible to movement or is liable as having some of the most stable lands and is labeled as having a high potential. I will, I don't know if I'll be able to in the 2-week period, but I can review certain soils that have been documented in the EIS as having high potential and ones that are mapped by other competent agencies as having just the opposite potential.

The engineering problems that Mr. Driessen said that would be encountered west or south of the Taft substation, I agree there would be some engineering difficulties, but not greater probably than any other parts on some of the steep parts of the line. Mr. Driesson himself has told me of some very steep, unstable powerlines where they have to take a Cat to drag the powerline back up the slope every year because it's been eroded down and I submit that if they can do that in some areas, they can do that in areas to get it out of the way

of other people's esthetic values in the area. And I think if you do get some current aerial photos when you were speaking of roads through that area, there are quite a few roads in that area and just a current aerial photo would show you how eroded it is.

One of my last points is that these corridors are essentially a dead corridor also. When you go in and stir vegetation like that and in order to build these, you will go in and the disturbance of the soil itself makes weeds, which are highly competitive and will travel right along the corridor, so you have a forest with a large potential for putting weeds in which reduces other alternatives to use in the weeds as woodland grazing. I think if you look at the growth potential of wood in some of those areas and in order to control that, you either have to use a herbicide or burn it and as someone has testified, they don't want to burn underneath the powerlines.

In conclusion, we basically, at least our homeowners association, don't want to see these because they're ugly, because we've moved out of town to avoid, or at least to get our privacy, to purchase something that's got a nice view, to live unencumbered and we find it a threat to our privacy and our values for this powerline to go through.

Senator MELCHER. Where that line crosses the Clark Fork, how far is that from this property?

Mr. KENNETT. From our property, approximately 2,200 feet. I will submit the drawings that BPA supplied us. Our closest neighbor is probably 1,500 feet from their property and their best view is looking over the river and up into Tank Creek where we see numerous eagles in the winter, a herd of big horn sheep. I don't know that they will not stay there if the powerline goes through, but I would believe they'd look for a better area.

Senator MELCHER. That line, of course, is just a broad line.

Mr. KENNETT. Well, we have the central and the——

Senator MELCHER. You walk very closely by it.

Mr. KENNETT. Yes, Mr. Driessen has provided the——

Senator MELCHER. And the——

Mr. KENNETT. And I believe the BPA, and I think you can basically engineer around most of the problems in that area. Again, it's the cost, you know, and from Blue Mountain to approximately our location, it's a straight shot. Engineeringwise, that's highly advantageous. If you were to go through those areas, which I believe you could, it's going to cost quite a bit more, but you may be able to make everyone feel not happy, but at least they can accept that.

Senator MELCHER. Well, I think you mentioned how section 503 of FLPMA is regarding the right-of-way corridor, section 505 directs whether it's Foresst Service or BLM?

Mr. KENNETT. I believe it says the appropriate secretary. In this case, it would be Secretary of Agriculture, but designated the regional forester can make a decision, but it directs minimizing damage to scenic and aesthetic values.

Mr. KENNETT. It seems just——

Senator MELCHER. It doesn't mention the way it would cost.

Mr. KENNETT. When you put a powerline through and you've got a corridor, I just can't believe that people sit here and try to argue and document that it's environmentally preferable to start a new line. That just doesn't make any logical or even illogical sense.

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Senator MELCHER. Well, that corridor is what, a half mile wide?

Mr. KENNETT. I'm not sure.

Senator MELCHER. I'm not either. I haven't looked at it that close.

Mr. KENNETT. You mean the final corridor or what they're looking at right now?

Senator MELCHER. No, the existing corridor that you're talking about.

Mr. KENNETT. I do not know how wide that is; 250 feet. And from talking to the engineers, I would be led to believe that it would be able to handle Colstrip 3 and 4 power lines and if what you said is correct, that there is no looking forward to Colstrip 13 and 14, then I see no reason to get a nice wide corridor going down the whole new part of western Montana.

Senator MELCHER. I don't know about 13 and 14. All I know is there is no projection. Colstrip 5 and 6. That is as of now, but I, frankly, don't, it's been often stated today, I don't see any demand at all for additional power. Colstrip may come, but the projection right now is not any closer to 5 and 6. In fact, Montana Power has said they built the plant up there in Great Falls about half the size, maybe a third of the size. So, projections aren't very vigorous for new plants right now. All right, thank you very much, Greg. Bill Sansom, you represent St. Regis and Superior Property Owners.

STATEMENT OF EDWARD SANSOM, ST. REGIS AND SUPERIOR PROPERTY OWNERS, ST. REGIS, MONT.

Mr. SANSOM. Senator Melcher, I don't represent any organized group, I'm just one of more than 800 registered voters in Mineral County who are damned upset about this powerline. I'm not an engineer and I don't have eight chairs of experts supporting my testimony, but I think I can reflect some of the feelings of the people.

Senator, I'm impressed with your efforts here today. It's too bad they aren't giving you an honest picture. In spite of the Government's best efforts, there are still a few people working, people who would be here especially in light of the recent proposed rate increases, but they need the money. If we really wanted some public input here, we would schedule these meetings when more of the public could be here.

Senator, have you ever seen the country? Have you ever looked at anything besides a map? Have you met the people? Why don't you come out and take a look at what the BPA intends to destroy? According to the BPA, the southern route will cost several more millions of dollars to construct than the northern route. Where do they get the authority to construct a more expensive line at taxpayer's or as the BPA calls them, ratepayer's expense? What about maintenance? Yearly cost to maintain a line through isolated high altitude steep terrain country, ratepayers again, right? The northern route is too crowded with lines already that claim BPA. There is no room for twin 500–kV lines. Why consider consolidated lines or the removal of an obsolete line? The BPA merely selects another corridor and another and another. They can take all they want free. Are they a Government agency? Well, yes, when it comes to power of eminent domain and not paying taxes. No, when it comes to Federal control. Yes, when the States try to sue them. What is the BPA anyway? A

bureaucratic agency out of control? A monopoly or just a money gulping scourge on the land? Who wants the power? Idaho, Washington, Oregon? If power demand is so high, why is Washington shutting down its powerplant's construction?

Table 111 in BPA's draft EIS shows projected demand versus actual demand. Actual demand is diminishing at a rate that has the BPA worried. Is there a need to slash 75 miles of a 125-foot corridor along with five times that amount of access road of a county with the nearest tax base in the State? Do you have any idea how much prime timber and recreation land you're taking out of production forever?

Jobs. Mineral County has the highest unemployment rate in the State. Will BPA give the jobs? No, according to the Bonneville's own people, 90 percent of the work force will be brought in. Is the BPA responsive to communities and landowners upon this proposed route? The draft EIS was written before anybody in my area was ever talked to. Oh, they did send out some letters requesting permission to cross private land with their survey crews and offhandedly mentioned they may have already been there. Pay for damages, the BPA did say they would pay for damages they felt they caused. Can you believe it? For damages they felt they caused.

Senator Melcher said Federal projects should be constructed on Federal land as much as possible. Let me remind you of something you've obviously forgotten. The Federal Government doesn't own anything. That so-called Federal land is owned by the people. People who elected you to look after it for them. We've all commented on this project in meeting after meeting. We've talked and talked and we've listened and listened and nowhere have we heard anything positive in support of this line.

Come on, Senators, you're invited to get into some jeans and travel this proposed route with us. Talk to some people. It's election year, right? You can bet we remember it. We want you to keep this line out of Mineral County. If you can't stop this idiotic project altogether, at least make BPA clean up and use the more logical and less costly northern route. Stop mealy-mouthing us isolated individuals while you're giving the BPA our land. Senator, you're our only hope.

What is the overall environmental impact picture, anyway? We have the choice of no corridor, one corridor, two corridors, future corridors, maybe throw in a gasline or two, oil exploration, gas leasing, drilling rights, and, Senator, you're either allowing it to happen or you're powerless to stop it. Either way it adds up to a bad big zero.

Senator, I've attended the BPA meetings in St. Regis. I know about that country in that area. Mr. Johnson, Frick, and Driessen are attempting to sell you a bill of goods. They talked about the CC Divide alternate? Mr. Driessen admitted at a BPA meeting in St. Regis he didn't even know where it was at. He didn't even know where it was. He'd never been to St. Regis before this meeting. He drew this line on a map. Most of their testimony has no substance in reality. Scoping process? They didn't talk to any of us during their scoping process. Consultation with landowners? Alternate roots along the CC and State line? We haven't seen where they're at. Esthetic impact, the line parallels I90. You can see that. It's in sight. How many tourists are going to see that line everyday? Private land, sure, it doesn't cross

much private land through Mineral County. For one reason, there isn't much private land in Mineral County. More than 85 percent of the land in Mineral County is publicly owned. Take 5 acres out of the remaining 15 percent and that amounts to a lot of private land. Timber production loss? The only thing that will grow under those lines is Christmas trees, maybe, if they don't poison those with herbicides. That's a lot of acres out of timber production, that's a lot of loggers out of work. Senator, if you want the true picture of what the BPA is doing, don't ask them, get out and ask us. To give you some other examples.

Mr. Johnson said he had no part in this issue that was brought up by you earlier of the construction crews claiming eminent domain. I have here BPA answers to your questions on the Hot Springs-Bell transmission line project document that was sent out by the BPA. Question 17, does the BPA have the right to eminent domain? Yes, if the property owner and BPA cannot come to an agreement on compensation for the easement, BPA can use the right of eminent domain to condemn the property. If condemnation is carried out, a court of law determines adequate compensation.

There is some other interesting things in here. Can crops be grown under right-of-way? Yes, most crops. Land taken out of production by the transmission line is limited to the area occupied by the tower itself. In a few instances, landowners are seated right under the towers. What happens when that seed happens to be tamarack trees, fir, and larch? Senator, I want to invite you to put on a pair of jeans and boots, start at Garrison, meet with these people that have been here today, travel the line with them, and then you'll feel the same way we feel tbout it. The BPA exists to build powerlines. They don't exist to serve our needs. Thank you.

Senator MELCHER. Thank you all. It is good to have testimony from Garrison through Mineral County. It gives us a better picture, the feelings of the people in the area and a little more understanding on why there is needs. We'll certainly look further if we're going to have a satisfactory conclusion to this proposal. I think most of you were here all day, you've got good patience. I trust you'll recall that the Forest Service has agreed to look at some other routes. I've never been very impressed with the idea of, first of all, crossing Clark Fork and then paralleling the Clark Fork into the highway and then crossing it again. I think it is lacking for lots of reasons.

The first-hand information you provide is awfully good and has more impact on me and I'm sure the rest of the committee that will pay any attention to this hearing. But the process, as I see it right now, is to make sure that alternative routes are looked at and to determine if there is a satisfactory route. The possibility of burial of portions of the line, I think, is very significant and very important. It's difficult for me to understand how anything in Miller Cooley could ever be satisfactory unless it was buried. I would say the same for any other area where people lived and virtually right in their own neighborhood.

We'll do the best we can to review with the Forest Service other alternatives and work very conscientiously on those in the next coming months. We'll have very good suggestions that have a role today of other possibilities and it's got to be right with us or I don't think it ought to be built. It's that simple. Thank you all very much.

Eugene Fenderson, business manager of Laborer's International Union of North America, Local No. 254 and Jim Maze. Gene, we seem to have you listed first. We'll let you start.

STATEMENT OF EUGENE FENDERSON, BUSINESES MANAGER, LABORER'S INTERNATIONAL UNION OF NORTH AMERICA, LOCAL 254, HELENA, MONT.

Mr. FENDERSON. Thank you, Senator. I am Eugene Fenderson, business manager for Laborer's International Union, and I would like to thank Senator John Melcher and the subcommittee for giving Montana citizens an opportunity to comment on the effects of the BPA powerline on the public. You have heard from a number of people today about the variety of concerns regarding the powerline. All of them are important, but I would ask that you look with careful consideration at the impact on Montana workers. It is my firm belief that any major Federal project built within a State should employ a large percentage of the State's workers.

Here in Montana there is a work force that is well trained, highly skilled and very productive. A great number of these workers are currently unemployed. In addition to the unemployment which is devastating the entire country, the Montana workers have suffered from the shutdowns of the Anaconda Smelter and refining operations in the State and massive layoffs from the company's Butte open pit copper mining operation. That has caused almost 1,800 workers to lose their jobs.

In northwest Montana, lumber and timber workers are struggling in the depression level of unemployment, along with the rest of northwest. During the second week of August, 45 percent of the woods product workers in 12 Western States were laid off or worked reduced hours. The effect on Montana workers is reflected in a double digit unemployment experience in the counties of this area.

July unemployment in Montana was at 8.1 percent with over 32,000 workers out of work. State Labor Commissioner David Hunter predicts that that number could go as high as 50,000 jobless in the winter months and that the State's unemployment insurance fund could be broke by next spring.

Irby Construction Co., Jackson, Miss., the firm that is building the line from Townsend to Boulder, currently has about 150 workers on the job. Only 20 of them are Montana. The first says that it will hire at least 100 Montana workers out of a peak total of 300; 33 percent is just not good enough. The contractor building the lines between Harlowton and Townsend, Common Wealth Electric of Atlanta, Ga., is employing 85 percent of Montana workers.

Irby Construction is quoted by the press that the firm prefers to use its own experienced firm employees for this type of work. I would like to point out to the committee that Montana labor has built excellent roads for one of the largest State highway systems in the Nation. They have strung wire from one end of the State to the other and built dams such as Libby Dam. Much of the work has been done under difficult conditions, much of the BPA work will be done under similar conditions and Montana workers are familiar with these conditions and able to deal with them. Montana workers have also proven

to be highly productive. Other large out of State companies working in Montana have generally hired Montana workers.

BPA contends that the powerlines will be good for Montana and good for the Northwest, but we question that economic advantage that our State will enjoy when out-of-State workers are unemployed. Our workers are involved in their communities. They send their kids to our schools and they help finance them. They have paid their taxes here for many years to help build our State. They support Montana businesses and Montana products.

We would request that in the final EIS statement for the line from Garrison west, BPA outline how many workers will be needed and what specific skills wil be required of them. We would like the number and the skills defined for each craft.

We would also like to see a requirement included for a certain percent of Montana workers to be hired for that project. That requirement should stipulate that no less than 85 percent of the work force be Montana workers.

Senator, it is my understanding that the original intent of BPA was much the same as the TVA. In other words, it was devised to provide assistance and a boost to the economy of certain regions. It seems that the Federal Government has lost sight of that concept as they implement BPA in our State. It is clearly up to Congress to reinstitute the original intent. We will appreciate the serious consideration of our position.

Senator, I also have a couple of verbal comments from listening to testimony today, and that's basically on the need of the whole energy field. I would like to point out at this time that this country is in a depression type economic slump, and one of the reasons for the lack of need of power at this point, and we've looked into some of these predictions, it is because our lumber mills are shut down, the welders are not running on the west coast to repair the ships to ship our grain overseas to help feed the world and general industry is down, and I think that has a great deal to do with the need question. I thank you.

Senator MELCHER. In other words, poor demand because of a poor economic situation?

Mr. FENDERSON. Absolutely.

Senator MELCHER. Jim?

STATEMENT OF JIM MAYES, REPRESENTING THE INTERNATIONAL UNION OF OPERATING ENGINEERS LOCAL NO. 400, HELENA, MONT.

Mr. MAYES. I am Jim Mayes. Senator John Melcher is to be commended for scheduling this hearing in Montana. Those of us most affected by the BPA powerline can make known our concerns with the Senate and subcommittee.

There has been a great deal of controversy over the building of the BPA powerlines. The main area of concern for members of Local 400 is jobs for Montana workers. Montana, along with most of the Nation, is suffering from high unemployment. The July unemployment rate was 8.1 percent and for the second month in a row, the State jobless rate was the highest for this particular month since the Depression. There were over 32,000 jobless in July.

Local 400 has over 3,200 members. July is generally the peak of the season for our members but over 40 percent of them were unemployed

at that time. Our members have been hit hard by the economic recession of the country's experience. They have also been hit hard by the cutback in Federal high income. Over the last 5 years, the State received an average of over $1 million a year. Montana received $87.7 million. This year Montana will receive only a little over $65 million. They cut them over 30 percent. Those cutbacks mean that there are 50 percent fewer of our members working on the highways in the past 5 years.

Highway unemployment because some our our members are working on the portion of the BPA powerline. The lines from Colstrip to Townsend and from Boulder to Garrison are being built by union contractors. That means that those out of work the longest are hired first, and that means that the Montana workers are being hired.

On the Boulder to Garrison line, there are only seven workers from out of State. The Colstrip to Townsend line, all the workers are Montanans except supervisory personnel. The work force is 100 percent Montanans.

In contrast, a nonfirm building is hiring only a small percentage of Montana workers. The firm claims that up to one-third of the workers will be Montanans, but there are many who will doubt the number will even come close to that .Currently there are a few Montanans working on that portion of the line.

While I am concerned first of all with Local 400 members, I would like to emphasize that I'm speaking on behalf of all Montana workers as well. Since Montana will have to endure any negative impacts of the BPA powerline, it is only right that they at least have the opportunity of employment of the building of the lines.

This is especially important on the section from Garrison west, because unemployment is as high as 18 percent in some counties.

Hiring in-State workers has a positive effect on all aspects of our State's economy. Montana workers could purchase goods and services from Montana merchants helping Montana businesses stay solvent. They pay Montana taxes and they contribute in many other ways in the improvement.

They also have a negative socioeconomic impact on local communities often placing a burden on law enforcement agencies and social services agencies. Montana workers care about their communities and State and are less likely to cause problems.

On behalf of the workers and a citizen of Montana, I would urge the subcommittee to consider legislation of in-State hiring for this BPA project. Thank you for your consideration. That is our position.

Senator MELCHER. The Townsend-to-Boulder section, I just know both of you have identified that area as very few Montana workers. Is that Irby Construction?

Mr. FENDERSON. Yes, it is, Senator. Our best estimation at this time is that it is somewhere in the neighborhood of 20 Montanans on that section.

Senator MELCHER. Out of how many, do you know?

Mr. FENDERSON. Approximately 150 people on job site right now.

Mr. MAYES. Senator, because of our Montana law passed by the legislature that Montana crane operators require license because of health and safety, Irby Construction has been employing some of our crane operators, but the statement was made by the project manager

of Irby Construction yesterday that as soon as his supervisors and his employees from Mississippi acquire their crane license, they are going to lay off all of the Montana employees. That's what was said yesterday.

Senator MELCHER. Mr. Frick, can you acquaint us on this? Just referring to Mr. Johnson's testimony this morning. It says about 230 persons have been hired in Montana for the construction people. The total number of persons presently working on the construction of the project is 387.

Mr. FRICK. These figures, Senator, are the total. We didn't divide them. I think these men have better information than I have. We've been trying to do what we could by pushing them for local employment. These gentlemen have much better information than I do as to what Peter said this morning because ours was put together last week and of the three contractors, Irby has been a regular problem on local employment more than the other two and we've been trying to do what we can, for our construction people out in the field. We've had some meetings with the union representatives and particularly Irby and the other contracts to see if they'll utilize the maximum stand of Montana people. I think that their figures are possibly fairly close. We've got a little bit different projection in that our projection that Irby gave us was that their maximum outside employment would level off between 122 and 130 range and their people would be up over 200, but that's what they gave us. We haven't reached that point.

Senator MELCHER. I'd like to have an accurate figure. This testimony, you know, is given as of today, 230 out of a total work force of 387 and if Irby employed——

Mr. FENDERSON. These are figures from last week, Senator, but at that time, I believe their work force was around 150.

Senator MELCHER. And 22 of them were Montanans.

Mr. FENDERSON. The difference in the overall figure, I think, which the BPA has presented to you this morning, what I am presenting now, took in the other two bids or the other two sections on the line, which those are being carried with much heavier Montana workers, so it runs that percentage up quite a bit.

Senator MELCHER. Well, this is just, you know, this says 230 out of 387 which means that 157 would not be Montanans, but what you're telling me is that 1 contractor has 130 of those 157 known Montanans, so that only leaves 27 for everybody else. I don't think that matches with your testimony either, so there is some disparity here that's greater than what Mr. Johnson told us. The point is, I don't know anything about Irby and I'd like to have some understanding between BPA, Irby, and us.

Mr. FRICK. Senator, could I introduce George Eskridge? He is our district manager. He's the one Peter asked to get the figures from the contractors last week.

Mr. ESKRIDGE. I'm sorry to say I don't have the figures with me. If I could refer to yours, however, we did contact a contractor. Now, Irby, of course, is not union, and Irby hires off the street rather than through a union hall and those are figures that Irby gave to me and, well, gave them to me about 1 week ago; then we updated them as of Friday, flew our contract inspector out of Helena. We have to believe that Irby, when they hire somebody, I realize that they don't ask them

necessarily where they come from, but in their figures and as far as they're concerned, because they hire them in Boulder and they're not company employees or they don't know who they are or where they were, as far as they're concerned, they're local employees. There is a possibility that they could be transient people that have come from other areas of the State or from Idaho, perhaps, or Wyoming. Irby doesn't attempt to try to find that out. As far as they are concerned, that's what we declined as a lower hire.

Senator MELCHER. You must feel that Irby is a respectable contractor.

Mr. ESKRIDGE. We feel that.

Senator MELCHER. And a competent one.

Mr. ESKRIDGE. We feel they're very competent and we feel that they're very interested in hiring as many people in Montana as they can hire. I've talked to both the subcontractor and also Charles Gatewood——

Senator MELCHER. This isn't my line of work, but I can tell you that I know the first way to go broke and the best way to go broke for a contractor is to hire somebody off the street. I don't believe a contractor that's competent and respectable and efficient hires somebody they don't know anything about. I think they'd know where they worked before, their experience on something.

Mr. ESKRIDGE. If I could elaborate a little bit on what they said. They keep their, some of their prime employees with them, some of their operators, their erection crew staff. They also hire a lot of laborers and other people that are senior or have been loyal to the company over the years. If it's not there, they just go out and hire them, but they've indicated to me that in construction, they'll have a hundred of their own people and approximately a hundred people that they will hire in that area, so that's approximatey two-thirds. Now, I have no choice other than to believe what they've told me and in my estimation, what they're saying to me is a conscientious desire on their part to try to comply with our need to put people to work in Montana.

Senator MELCHER. Well, there is all sorts of forms. God knows there is, and they fill them out and they know where these people live and they know their social security number and they know the work best. It's discouraging to run into this because, granted, when you let a contract, you can't dictate to them. You certainly must have discussed this with them before and they've given you some understanding of what the situation would be and that understanding would not be that they'd hire a small percentage of Montanans for 2 weeks while they had nine Montanans working for whatever the greater part of time. I assume they're in there for what, 6 months or so?

Mr. ESKRIDGE. They may be in there——

Senator MELCHER. For a year?

Mr. FRICK. Close to a year.

Senator MELCHER. I assume your understanding with them was that the Montanans, the bulk of the people that are working, and that doesn't mean to hire just for a little bit of the period of time and say well, for a few weeks we had two-thirds of the payroll as Montanans and two-thirds of the payroll from the word go.

Mr. ESKRIDGE. If I could elaborate a little bit more, Senator. I've talked to both Irby Construction and Power City Construction. One

is union, of course, one is nonunion. In my conversations with the project superintendents, both of them gave me similar feelings about their intentions of hiring people in Montana and, of course, everybody realizes here that Bonneville cannot dictate hiring activities, but as a Montanan myself, I, of course, would like to see as many people in Montana hired as they could. It would make my job a lot easier.

Senator MELCHER. I'm sure, I'm sure you do your best, but I like to have accurate figures and I think you can provide them to us.

Mr. ESKRIDGE. We will provide you with the figures.

Senator MELCHER. What they said at the time they got the contract, we ought to know that, too. Thank you very much.

Miss Rose Magnuson of Missoula and Bob Ream of Missoula. Rose, you're first.

STATEMENT OF ROSE MAGNUSON, MEMBER, COMMON CAUSE REGIONAL TASK FORCE

Ms. MAGNUSON. For the record, my name is Rose Magnuson, as a Common Cause regional task force member, I would like to thank your committee for answering our call for congressional oversight of the procedures leading to the implementation of the Regional Power Act and for arranging this particular public hearing.

My suggestions today are made not as a representative of any group nor under the assumption that I'm an expert in the transmission area. Instead, they are made as an inquiring, concerned private citizen.

While the scope of this hearing is primarily to consider one particular siting, the issues surrounding that siting lead me to request expanding the scope to a matter that may affect the building of future transmission lines as well as inter-ties with the southwest and Bonneville's application of the "one utility" concept.

The main suggestion I would like to make is that this subcommittee consider amending the 1974 Federal Columbia River Transmission System Act to define when it is appropriate for a Federal agency to build transmission lines for investor-owned utilities or public utilities customers.

The BPA administrator is necessarily given a great deal of discretion through this and various acts. However, after observing the fast changes in surplus and deficit power supply projections and the changing uses of power from this line under question, during the time this particular siting has been processed, I believe that congressional definition is needed to guide the administrator in determining one, if the energy to be transmitted will serve the needs of the Northwest or if it will be used outside the region. To determine two, if the total effects of the siting powerlines are justified by the need for the energy. Here I'd like to insert that need can be demonstrated through power counsel findings and/or interdependent forecasting on a bigger than regional scale. To determine three, if the rates imposed for wheeling energy for out of region use are equitable and reflect the financial, social and environmental effects of the lines. Four, if all priority resources such as conservation, mandated by the Regional Power Act have been explored.

I'd like to insert four and a half into the prepared statement I gave you. It would be if the lines will be designed to achieve the least line

loss, and then five, to determine if and when an exchange customer should be granted the contractual rights of having BPA build power-lines for them, and in determining finally, six, if the Federal use of the power of eminent domain is justified by who will benefit from the building of specific lines; for instance, under what conditions should BPA build inter-tie capacity for customers to transport higher priced thermal generated power out of the region while using cheaper BPA power to meet their regional system needs.

In consideration of these points and other points made today, I trust the committee will agree that the BPA administrator needs congressionally imposed boundaries within which he can exercise his discretion in dealing with these complicated issues and the many interest groups involved. Thank you.

Senator MELCHER. Thank you, Rose. Bob?

STATEMENT OF BOB REAM, MISSOULA, MONT.

Mr. REAM. Yes, my name is Bob Ream. I might point out that both Rose and myself are candidates for the Montana House of Representatives. For over 2 years since BPA announced its plans to con struct twin-500 kilovolt lines from Townsend west through Missoula County, I have been involved in the struggle to make this unwheeley Federal agency more accountable to the public and more responsive to Montanans.

The house district I'm running for covers the majority of the proposed routes through Missoula County from Beavertail Hill on east through both the northern route all the way past Grant Creek and the southern route to where Miller Creek enters the Bitterroot River. I think we've seen from the previous, from the second to the last panel, that the feelings of people in western Montana are running very high on this issue. I certainly found this when I was going door to door during the primary.

Part of the reason for this is that BPA did not announce its intentions to build the lines until 1977. A recent Missoulian arm pointed out that the BPA was planning for the lines as early as 1971. They said records show that BPA has been and is working behind the seasons to make sure the Colstrip project is ostensibly a private venture, is completed and on line in a timely manner. Although Bonneville's involvement so far has not been proven illegal, this situation must be examined in light of Bonneville's role in the Pacific northwest and particularly in the State of Montana. The role that BPA plays is increasingly frightening to the people of this State because it appears to be a role of unchecked and absolute power. The BPA lacks sufficient checks on its authority and the issue of these power lines is an illustration of that problem. What does it mean to our State that the Federal agency is building these lines instead of the State utility that it was originally approved to build them by the State?

First, it means that the State-approved route is not being followed through Montana. Second, it means that the $235 million in property taxes that the private utility would have paid and as you heard from the county commissioners, was expected to be paid, will be lost because BPA has no authority to make these payments. Part of the reason for State approval of the Colstrip project was just these taxes. Third,

it means that the State has no real authority over the siting of these lines. The Federal agency needs to comply with the Montana Major Facilities Siting Act.

We must also question the initial authorization of the BPA to participate in this project and would like to request that your committee look into this authorization. The language of the authorization does not specify where BPA would hook into the Montana powerlines or even that they would build transmission lines. Indeed, it states that they would construct integrating facilities. It's no wonder that this authorization was overlooked. The people of this State feel that they have been duked and in truth, they have. Working with BPA is frustrating because the citizens of the State have no recourse and the BPA is apparently subject to no controls. I would like to recommend that this committee look into this matter in this age of New Federalism. We may well say that if this is an example of the New Federalism, we certainly don't want it in our State.

One possible solution to the problem would be to give the power counsel increased authority over the BPA and oversight for its budget. In the future, we in this State want to make sure that a private utility cannot circumvent State law by using the BPA's authority to ignore them. The people of Montana have passed strong siting laws for a good reason and they want to see these laws respected.

If I'm elected, I will do what I can at the State level to see that this can't happen again and I would like to enlist your aid, Senator Melcher, to do the same at the national level. Montanans have never and never will allow themselves to be duked by a Federal agency without a good fight. Thank you.

[The prepared statement of Mr. Ream follows:]

PREPARED STATEMENT OF BOB REAM, MISSOULA, MONT.

My name is Bob Ream and I am a candidate for the Montana House of Representatives from District 93. For over two years, since the Bonneville Power Administration announced its plans to construct twin 500 kv lines from Townsend west through Missoula County, I have been involved in the struggle to make this unwieldy federal agency more accountable to the public, and more responsive to Montanans.

I am going to briefly touch on the history of how it is that the BPA, a federal agency, is building transmission lines for a private utility in the state of Montana.

The BPA did not announce its intentions to build the lines until 1977. Records requested by the Missoulian through the Freedom of Information Act show that the BPA was planning for the lines as early as 1971. I quote from an article in the Missoulian based on these records, written by Jim Robbins on the 29th of May, 1982. ". . . records show that BPA has been and is working behind the scenes to make sure the Colstrip Project, ostensibly a private venture, is completed and on line in a timely manner."

Although BPA's involvement is not strictly illegal, this incident must be examined in light of the BPA's role in the Pacific Northwest, and particularly in the state of Montana. The role that the BPA plays is increasingly frightening to the people of this state because it appears to be a role of unchecked, and absolute power. The BPA lacks sufficient checks on its authority, and the issue of these powerlines is an illustration of that problem.

What does it mean to our state that the federal agency is building these lines instead of the state utility that was approved to build them?

First, it means that the state approved route is not being followed through Montana.

Second, it means that $235 million dollars in property taxes that the private utility would have paid, will be lost because BPA has no "authority" to make these payments. Part of the reason for state approval of the Colstrip project was just these taxes.

Third, it means that the state has no real authority over the siting of these lines. The federal agency need not comply with the Montana Major Facility Siting Act.

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The people of this state feel that they have been duped, and in truth, they have. Working with the BPA is frustrating because the citizens of the state have no recourse, and the BPA is apparently subject to no controls. I would like to recommend that this committee look into the matter. In this age of "new federalism" we may well say that if this is an example of the "new federalism", we don't want it in our state. One possible solution to the problem would be to give the Power Council increased authority over the BPA and oversight for its budget.

In the future, we in this state, want to make sure that a private utility cannot circumvent state laws by using the BPA's authority to ignore them. The people of Montana have passed strong siting laws for a good reason, and they want to see these laws respected. If I am elected, I will do what I can at a state level to see that this can never happen again—and I would like to request that you, Senator Melcher, do thes same at the national level. Montanans have never, and never will allow themselves to be duped by a federal agency without a good fight.

Senator MELCHER. Thank you. You've selected the 1974 Federal Columbia River Transmission Act rather than the Northwest Power Act and I'm sure you have a reason for suggesting that that be amended rather than the like of the later act, Rose, but I'm not aware of what that reason is.

Ms. MAGNUSON. The reason is that section 4 is the one where it says that BPA may build transmission lines and is included in that.

Senator MELCHER. More specific then.

Ms. MAGNUSON. Oh, exactly.

Senator MELCHER. Section 4 of the 1974 act.

Ms. MAGNUSON. Exactly. And I also feel that the Transmission Act and other acts need to be brought up to the same focus and the same goals as the Regional Power Act and that's where some of our conflicts are coming in.

Senator MELCHER. Bob, are you satisfied that the current language in the Montana Siting Act covers transmission lines?

Mr. REAM. Well, I think it does cover transmission lines. I did have a comment and I didn't have it explicitly in my testimony. I think Judge Batton, I think hinged in part on his interpretation of the intent of Congress on the section of FLPMA that deals with adhering to State siting acts, and I guess that's where I would enlist your aid at the Federal level to help in the interpretation, what did Congress intend. I think it means for us, if elected, or for the legislature, during the next legislative session, he said that the siting act was not explicit enough in certain areas. He felt that they did comply with substantive portions and that was the way it was written. It did not deal with procedural rules and I think that will have to be clarified in our State Facility Siting Act somehow, but it would certainly help if it was clarified in FLPMA. I'm sorry I don't have that section or paragraph of FLPMA with me. But it does direct Federal agencies to work with the State Facilities Siting Acts.

Senator MELCHER. Well, I just wonder about that FLPMA seems clear to me. Section 505, each right-of-way shall contain (A), and then it goes through a series, part of which was in compliance with

State standards for public health and safety and environmental protection and siting. Construction, operation, and maintenance for rights-of-way for similar purposes, that those standards are more stringent than applicable Federal standards. I've had a lot to do with this particular, to do with FLPMA, period, but this particular title on rights-of-way, I went over very carefully and it seems to me that if it's clear, that there are State standards for siting and construction and operation and you can't say anything. I don't know how you would say anything any clearer that the right-of-way permit will contain such terms and conditions.

Mr. REAM. I'm not an attorney and I don't know how to say it any clearer, either, but as I understand it, they're both in substantive portions of the act as well as the procedural portions of the act.

Senator MELCHER. That's substance, but I just wonder, it's my impression that the State siting act, the Montana State Siting Act is not clear. That's my impression, and if it isn't, then it should be made clear if that's a feeling of the people in Montana and I'm sure it is, but the siting should cover transmission lines and it doesn't seem to me that FLPMA leaves any question about the requirement to comply with State siting law. Now, if that's wrong, I'd like to know, too.

Mr. KENNETT. I wasn't working for the committee when FLPMA was passed, so I'm not as familiar as you are with the legislative history, but just reading the statute, I agree that it says specifically siting and it would seem that the provision is clear, that we're in more stringent and it would be included in the right-of-way, but I don't consider myself to be an expert on FLPMA by any means, so——

Mr. REAM. Well, I would just ask you as an attorney to look at it, to look at Judge Battin's decision and the testimony that went in.

Mr. KENNETT. I have not seen Judge Battin's decision, so I have no opinion on that either.

Mr. REAM. I agree our State——

Mr. HALVORSON. Senator Melcher, I'm assistant general counsel for BPA and we have spent considerable time looking at four cases that relate to section 505 of the FLPMA as it applies to siting and its relationship to transmission lines of the Federal Government. Among the issues that have developed, is whether section 505 is intended, as has been urged by the States of Washington, Montana, and South Dakota, to confer siting authority upon the State bodies having that responsibility, over Federal facilities such as those of BPA or of the Western Area Power Administration. The decision in both the eighth and the ninth circuits said quite clearly to us, and Judge Battin's most recent opinion of August 13 says that a procedure by which the States apply these standards in the case of the State of Montana, a standard of the least environmentally adverse location, is not an appropriate method for the State to use with respect to identifying a standard applicable to a Federal agency. Section 505 of FLPMA refers to a more objective standard. Parts per million or that sort of thing.

I might add, that's my application to this and the reference to siting, as it was used in the ninth circuit opinion, which was an appeal by the State of Washington, held that if there were State standards, substantive standards, than the court at that time used that phrase instead of simply the more stringent standard, but if there was substantive standards, than the State was best able to determine whether

or not the Federal agency was in compliance with those, and asked that we provide information to the State of Washington for such a determination, which has been done. The same decision was made by Judge Battin here on March 4 and we did provide the information to the State and the State made a determination with respect to compliance and a compliance determination had about three parts in it. For the most part, the State agreed with our location, the power transmission line location and found that there were nine general construction stndards that it wanted to apply to us and a location on the Missouri River, which it held was also the standard.

Judge Battin's most recent opinion held that there was no substantive standard and that the State had not articulated any substantive standards with which BPA was not in compliance and therefor, Judge Battin directed that we proceed. He made a clear distinction, Senator, between a procedure which arrives as a result of an existing standard, such as my example, of parts per million. I don't know of such an objective standard.

Senator MELCHER. In other words, he said unless the State had standards for environmental protection and siting and construction and operation, that this 505 would not apply.

Mr. HALVORSON. That is correct, sir. It was not a statute granting general jurisdiction over a Federal agency to a State for the purpose of location or siting.

Senator MELCHER. Well, where is the ball? Whose court is it, in your opinion?

Mr. HALVORSON. We have a decision, Mr. Berry spoke today about our agreements and our memorandum of understanding. It's Bonneville's position that we want to cooperate as fully as we can with the State of Montana in getting the better location for our transmission line sited as was indicated today by the Forest Service witness, the siting of the transmission involves the Forest Service. They have to make the decision on either 35, 45 or 60 percent of a transmission line among those alternatives that are on the board so that it remains a Federal decision regarding the siting, but we do want a full interaction of the State. That is, hopefully, we can achieve that through these very contracts and arrangements we have made with the Department of Natural Resources and with the State of Montana. The State has also advised that they're contemplating an appeal from the most recent decision of Judge Battin. That has not been taken yet and I am advised that it will include a motion for reconsideration as a prior action by the State before the appeal is taken.

Senator MELCHER. Thank you very much. Bob and Rose, if you want it tighter, I'd advise you that the State legislature will look at it very closely. Judge Battin is—I don't know how often he's over here. Not too often. He's my predecessor in the House. He's a very competent judge and an excellent one. Thank you both very much.

Mr. Frick, I have one more question for you and I'm not sure whether it leads us to anywhere we want to go, but I do want to ask you for the benefit of this hearing record. We've been talking about going from Garrison west. Have you looked at going from Garrison south and then into the Snake River Flats in Idaho?

Mr. FRICK. Yes, way back. We didn't make those studies. Montana Power made the initial studies on that back when they first chose Hot Springs connection. We reviewed those studies and then reviewed the

update on here the last year or so because of the requests that came into the public review. They still show that the southern Idaho system, maybe you can see it on the map here, that this system right through here is heavily loaded, particularly with the bridge or power that's floating and PL&L has relieved a little bit of that, but there isn't a capacity and there won't be until it's strengthened across here for a connection from Garrison into any of this system to get to the Northwest. The connection would have to go from Garrison all the way into this backbone system to become effective. This way, it comes into the existing system.

Senator MELCHER. Are we to believe that the future of Bonneville will continue as it has in the recent past in wheeling power in California?

Mr. FRICK. I would think if we stay in this type of water year and then also that those intertie lines will be used to exchange capacity, diversity capacity during the annual cycle, particularly on the thermal plants, once you bring a thermal plant on, you're better to operate it steady. The Northwest low pattern doesn't allow for that continuous operation, so I'm sure both thermal utility owners and Bonneville and the hydro owners in the spring will continue to utilize that California market as long as it exists. This year, it was very competitive. There was a lot of surplus in northern Idaho, California, all over the Northwest and the floor dropped, I think as somebody testified, to a pretty low price, but I think that will be continued to be used to market surplus as well as to meld the thermal diversity and we are looking at possibly even increasing a capacity from south to see if there is more normal diversity that could be utilized and contracted for which would eliminate the need for thermal plants both here as well as in Northwest or Southwest.

Senator MELCHER. The Idaho power needs are—is that a private utility there?

Mr. FRICK. Yes, the blue here is all Idaho power.

Senator MELCHER. Is the Idaho power project, are the needs well taken care of?

Mr. FRICK. No, they're buying both—they are buying right now outside of the State. I'm not sure if you're familiar, but they proposed some coal-fired plants in southern Idaho and those did not receive approval as of yet to proceed and they're, at this stage, and I think partly turned by the money market condition, trying to buy pieces of other plants at this stage. Their transmission here is almost exclusively 230. A 500 grid has never been developed. If this had been developed at a 500 level, it might be a different picture.

Senator MELCHER. It has been reviewed both by Montana Power years ago?

Mr. FRICK. Yes, Montana Power made regional studies and our fellows in the Western States studied it, again, within the last year and pretty well came to the same conclusion. I think Montana Power testified to that in a couple of the previous hearings. State DNRC took quite a close look at this in their latest review.

Senator MELCHER. Thank you very much, Mr. Frick. That concludes our hearing today. The hearing record will remain open for 2 weeks and the committee welcomes any further written testimony.

[Whereupon, at 4:05 p.m., the hearing was adjourned.]

APPENDIX

Additional Material Submitted for the Record

DEPARTMENT OF ENERGY
Bonneville Power Administration
Montana District Office
800 Kensington
Missoula, MT 59801

(406) 329-3860
OKK

August 30, 1982

Mr. Earl Hiett
Honorable John Melcher's Office
P.O. Box 8568
Missoula, MT 59807

Dear Earl:

Enclosed is a copy of the employment statistics we compiled for the Townsend-Garrison project. Please insert in the official record of Senator Melcher's August 26, 1982, subcommittee hearing.

If you have any questions, please let me know.

Sincerely,

George E. Eskridge
Projects Information Officer

Enclosure

12-893 O - 83 - 13

EMPLOYMENT STATISTICS FOR TOWNSEND-GARRISON CONSTRUCTION

Contractor	Employment on 8/20/82		Estimated Employment at Peak of Construction
(Schedule I)			
Irby Construction	Local Hire	52	175
	Company Emp.	113	125
	Total	165	300
JTS	Local Hire	42	47
	Company Emp.	15	15
	Total	57	62
(Schedule II)			
Power City Construction	Local Hire	82	108
	Company Emp.	12	12
	Total	94	120
Pacific States Clearing	Local Hire	10	14
	Company Emp.	11	11
	Total	21	25
Garrison Substation Power City Electric and Subcontractors	Local Hire	42	132
	Company Emp.	8	8
	Total	50	140
TOTALS	Local Hire	228	476
	Company Emp.	159	171
	Total	387	647

MISSOULA COUNTY
BOARD OF COUNTY COMMISSIONERS
• Missoula County Courthouse • Missoula, Montana 59802
(406) 721-5700

June 30, 1982
BCC-82-430

Public Involvement Coordinator
Bonneville Power Administration
P.O. Box 12999
Portland, Oregon 97212

Dear Mr. Geiger:

We are herewith submitting our comments on the proposed impact aid payments formula. We generally support the position taken by Missoula County Attorney Robert L. Deschampe, III in his comments to you. In addition, we offer the following comments of our own.

Specifically, we wish to underscore Mr. Deschamps' insistence that Congress requires that BPA recompense local governments for all costs associated with powerline construction. This means that the payment formula cannot be drawn so as to place impossible documentation burdens on local governments nor to exclude clearly demonstrable costs. Indirect as well as direct costs must be taken into account by the Administrator in developing the formula. This can only be accomplished through a formula and billing procedure that includes not only payments for documented costs such as replacement of damaged roads and police protection to BPA facilities, but also indirect costs such as diminished tax revenue through withdrawal of land from taxable uses. For example, the construction of the proposed 500 KV powerline through Missoula County's Upper Miller Creek Road may very well prevent the development of a proposed Planned Unit of Development. Surely, such loss of tax revenue from commercial development should be construed as a cost to local government. Therefore, a flat rate payment based on factors such as mileage or proximity to urban development in order to cover indirect costs ought to be coupled with outright full reimbursement of documented direct costs.

Our concern is that the total true cost to local government of transmission line routing be included in the impact aid payment formula. As we have repeatedly stated in previous communications and in face-to-face discussions, hearings and meetings with BPA officials, we believe that the BPA Administrator has the power to broadly interpret his statutory authority in order to make impact aid payments that cover true costs. If BPA is unwilling to recompense counties for the costs of

powerlines that run through them, then we suggest that BPA does not have the authority to build those powerlines and ought to seek routes which have costs which BPA is able to meet.

Sincerely,

MISSOULA COUNTY BOARD OF COMMISSIONERS

Barbara Evans, Chairman

Germaine Conrad, Commissioner

Bob Palmer, Commissioner

BCC/HS/ls

cc: Robert L. Deschamps, III
Missoula County Attorney

Gerald Mueller
Northwest Power Planning Council

June 30, 1982

Public Involvement Coordinator
Bonneville Power Administration
P.O. Box 12999
Portland, Oregon 97212

Re: Comments on proposed "impact aid" payments formula

Dear Ms. Geiger:

Attached please find my written comments on BPA's proposed "impact aid" payments formula. These comments supplement my brief oral comments made at the May 25 Missoula public hearing.

Thank you for the opportunity to comment on this important issue.

Sincerely,

Robert L. Deschamps III
Missoula County Attorney

RLD/njb
Enclosure (1)

COMMENTS ON PROPOSED BPA "IMPACT AID" FORMULA.

Section 1: Purpose.

The purpose section appears generally adequate. I would strike the word "authorized" from the sentence "the Administrator proposes to provide impact aid assistance that pays local governments for cost of services provided to BPA in its capacity as a legal entity entitled to receive local government services, but yet, as a tax-exempt Federal entity, one not generally authorized to pay for these services." In its stead I would substitute the word "required".

I suggest this change because the federal exemption from state and local taxation is an immunity. Thus, the federal government is not required to pay these taxes. However, Congress may waive this immunity. The waiver may come in the form of a mandatory requirement or in the form of a discretionary authorization, as here. Nevertheless, in the first instance, federal exemption does not stem from a question of authorization or non-authorization. Rather, it stems from a flat immunity - the federal government is not required to pay taxes like everyone does.

Section 2: Formula.

My only difficulty with this section is the statement that the administrator will provide impact aid for the "...total and actual costs of local governments..." Section 7(m)(2) of the Northwest Power Act does not limit the Administrator to paying "actual" costs. Instead, the Administrator is only required to "take into account" provided local services and their "associated costs." This language gives the administrator great discretion in awarding impact aid which could be more or less than the mathematical "actual cost" of provided services.

Although this discussion applies to several other sections in the proposed formula, I think the words "total and actual" ought to be stricken from the sentence. The reason for this is because it will be difficult if not impossible for local governments to accurately document their "total and actual costs". Extremely precise timekeeping, purchase of supply records, etc. would be required, and few if any local governments have this kind of sophistication. Furthermore to require such sophistication for the isolated and occasional provision of services to the BPA is unworkable - people would most likely forget to record the necessary data, especially for routine or minor incidents. Finally, even if such a system could be made to work, the additional paperwork and administration required would add considerably to the cost of the real services provided, not to mention the auditing costs to BPA when reviewing requests for payment.

A better solution, albeit less precise, would be some flat rate

payment to all local governments, with provision for additional payments in the event of documented exceptional costs for unusual occurrences such as natural disasters, major fires, sabotage, etc. In addition to being more realistic, this approach would also reduce substantially the administrative costs for everyone.

Section 3: Definitions.

(i) the $1,000 threshold for what constitutes a "substantial impact" is unrealistic, especially if the flat rate proposal suggested above is adopted. Nine hundred dollars a year could be an extreme impact on a small service district directly impacted by a transmission facility. Examples might include irrigation districts, special improvement districts, park boards, etc. A more equitable approach, and the one envisaged by Congress is one that says "if you're impacted, you're entitled to be paid."

(o) the requirement of a 100-percent increase in the power carrying capacity of an existing facility may be too great. For example, the conversion of a wood tower 161 Kv. line to a metal tower 240 Kv. would not be a "substantial modification." Some lesser threshold should be used.

Section 5: Application for Payment.

(c) Again, the record keeping burdens will be at best difficult to comply with - see comments to Section 1, above.

The statement that "capital expenditures may not be charged" should be deleted, or at least modified to allow capital expenditures with prior BPA approval. If this provision remains, such items as road, bridge, and culvert repair or replacement would be precluded from reimbursement. I can also conceive of situations where other capital items, such as signs and fences would also be directly required by a transmisson facility, but again, would be precluded by the present regulation. Clearly the intent of Congress was to totally reimburse local governments for BPA facility expenses. No limitation was made on what these expenses might be, and proper capital expenditures should be included to fulfill Congress' intent.

(d) I can understand BPA's concerns that led to this provision, but it smacks of a big brother attitude, suggesting that local governments cannot be trusted to act responsibly. I suggest this provision be rewritten to provide for prior approval only for certain items, such as capital expenditures and that BPA reserves the right to require notice and assent to service levels in the event innappropriate amounts of service are being billed. Again, some kind of flat rate would avoid this problem.

Section 7: Limitations.

(a) Since generally speaking all of BPAs expenditures are subject to the availability of funds from revenues, this provision is probably implicit and can be deleted. Furthermore, its existence suggests a loophole that the Administrator could use to limit or terminate impact aid payments. BPA should budget in such a fashion that impact aid is fully funded, and in the event of unforseen shortfalls in revenue, impact aid should take a precedence over internal discretionary spending.

(d) I'm not certain I understand what this means. Clarification or an example would be helpful.

April 19, 1982
DRAFT EIS HEARING

Raymond O. Jensen
9155 Miller Crk. Road
(new address: 1200-1700 ft. North of the Lame Duck Line)

As the testimony of others shows, the only responsible action to take is the NO ACTION ALTERNATIVE.

Need was addressed almost 10 yrs. ago, in the Colstrip EIS, issued in 1975. Now the situation is vastly changed and forecasts for the future reflect that fact. It's become obvious that power consumers reduce their consumption as price increases, and the huge price increases scheduled to take effect this summer will force additional ratepayers to unplug their dependency on BPA. Therefore it's obvious that a prudent society would find a way to RE-ADDRESS THE NEED QUESTION.

The single question of need, taken with the cost factor, ought to be reason enough to cause BPA to reconsider and go back to Square One.

Of course, we've all heard BPA's answer to this: Need has been addressed in the Colstrip EIS and we are committed to continue building this Lame Duck Line, they say. It's not hard to see the mentality that created the WPPSS fiasco still at work.

Keep in mind that NO ACTION is the prudent alternative---while I address some of the specifics of the routing in the Miller Creek area.

We've been told that the reason for the placement in the Rodeo Ranchettes/K.O. Ranch area is out of consideration for Lolo residents. I drove to Lolo, looked at the route and saw that the route places the powerline in direct view of Lolo! What surprised me more was seeing that placement on the north slope instead of south slope of Cahoot Canyon puts it OUT of their line of sight until it exits the mouth of Cahoot Canyon!

Since there is room for adjustment and this small adjustment is better for all residents concerned, and whereas BPA is so concerned about impacts on people, and whereas we're assured repeatedly that our

comments count, we expect no objection whatsoever to this small adjustment.

Now, as soon as it exits the mouth of the canyon, many thousands of people will suffer visual impacts(11,000 a day traffic count on hwy. near Lolo, plus everyone in Rodeo Ranchettes and Miller Creek Valley-320 families. Total= 11,320 +. We feel very strongly that burial of the line from that point of visibility in Cahoot Canyon through Dead Man Gulch would be imperative, IF THIS LINE WERE BUILT, IF IT WERE BUILT THROUGH MISSOULA EVEN THOUGH THERE IS NO REASON TO BRING IT WITHIN REACH OF MISSOULA, AND IF, AS A FINAL ABSURDITY, THE TAFT ROUTE WERE CHOSEN.

Why is a corridor being planned thro a major subdivision, anyway?

In Missoula in March, Paul Brodeur (author of Expendable Americans & Zapping of America) discussed the adverse effects of electromagnetic radiation of the low-frequency, non-ionizing type on human health and related the results of various rather worrisome studies by reputable scientists and scientific bodies:

Increased incidence of depression and suicide (Eng.)
" " " cancer in children
" " " neurological, cardio-vascular effects, and blood changes (Russ.)
" " " elevated triglycerides level
" " " decreased simple arithmetic ability
eflux of calcium from brain tissue

These were some of the effects he discussed.. There need to be correlative studies done.

During the question and answer session following, the author was asked (I asked) about the distance factor involved in these studies. He responded 1000 ft.

At 1700 ft., what can one expect---less depression? ---fewer cancers? The answers haven't been researched; troublesome questions have been raised by good minds.

PAGE 3

If Lou Dreissen is here, will he tell me exactly how close the line would be to my house? Can he clear this up---he was quoted as saying in Mar. 17 edition of Malian, p. 5, that the nearest residence is 2000 ft. We measure on the map 1700 ft. to our house and there are closer ones.

THE COST OF UNDERGROUNDING IS INSIGNIFICANT---no matter what you tell us---33¢ per yr. per ratepayer for 20 or 30 years is not reason to deny undergrounding. If the line is built, it might as well be undergrounded where people are impacted.

THE ADVANTAGES OF UNDERGROUNDING IN THE MILLER CREEK AREA:

Mitigation of visual impacts on 11,320 plus people.
" " radio-TV interference.
" " shock hazards.
" " electromagnetic radiation's adverse biological effects.
" " Wildlife impacts (Bald eagles, deer, elk).
" " offsite property devaluation. Dames & Moore cites property devaluation as an effect of underground lines; overhead lines should affect prop. values, shouldn't they?
" " all other effects.

Also, the best time to develop the technology for undergrounding reliability is while building a line that isn't needed!

PAGE 4

EAGLES

Another of the reasons I don't like such high lines in Miller Creek ~~of~~ or crossing the Bitterroot River is the bald eagle population in the area.

Each summer I have enjoyed the soaring flight of bald eagles and 2-3 chicks as they came off the nest and learned to hunt. They seem to follow the hills along the creek and river. The powerlines would be at the height they tend to soar. I understand that they tend to run into powerlines and kill themselves.

Quote from Montana Magazine: "such as the duck kills from the 230-kV line from Colstrip that crosses Lake Broadview. Jon Malcolm, of the U.S. Fish and Wildlife Service, estimates that nearly 8,000 ducks die every year from flying into the line or from related causes, such as botulism brought about by the dacaying duck corpses in the lake."---from Line on Fire, by David Lambert, of the Dept. of Natural Resources and Conservation.

Finally, I wish to tie all of this background together by responding to specific points made in the EIS Vol. IV, pp. 54-63.

ge 5

GARRISON - TAFT SECTION E.I.S DRAFT IV- 54 to 63

LAND USE

~~Urban~~ residential:

In Miller Creek (~~Sections~~ SEGMENTS 138 & 139) the route passes within ½ mile of a small residential development (of only 85 homes) plus approximately 6 more across the valley floor in ~~Section~~ SEGMENT 139. The line also crosses thru the middle of a planned 220 unit sub-division that is already approved.

Anyone traveling to or from town has to see several towers and the line. Mitigation for this is to underground the line for approximately 5 miles starting in the floor of Cahoot Canyon out of sight and travel across the ridge to a spot across the Bitterroot River and Hiway 93.

Forestry:

The removal of 140 miles of forestland trees has to effect the rate of snowmelt during the spring season in this area. The too rapid run-off will cause flooding and a depletion of summer moisture.

Agriculture:

No ag-land should be removed from production anywhere. In Missoula County ag-land is dissappearing at too fast a rate already, and there is too little of it left now.

NATURAL RESOURCES:

Wildlife:

~~Sections~~ SEGMENTS 138 & 139 are both a nesting and hunting area for at least one pair of Endangered Bald Eagles and 2 pair of Golden Eagles . The Bitterroot River is a resting stop-over for Ducks and Geese. Mitigation is again to underground the line for at least 5 miles in ~~Section~~ SEGMENT 139 and hope that collisions don't occure in the other areas. No action would be a sure cure.

AESTHETICS

The first miles of Segment 139 would be visible from Lolo and South West Missoula and by local residents. Visibility will be extremely high by anyone entering or leaving the

6

Miller Creek Residential area. Three miles of towers will be seen going uphill West of the Bitterroot River.
BPA's orange marker high on the hill North of Cahoot Canyon can be seen from South West Missoula and Lolo and beyond. If a tower is placed there it will definetly be skylighted for ' miles around. Mitigation again is to underground the line from deep within Cahoot Canyon to a point across the Bitterroot River and Hiway 93.

SOCIAL CONSIDERATION

Segments 138 & 139 have high allienation in regards to the proposed route even though the EIS doesn't recognize it.

I am asking you to strongly consider undergrounding the line through the lower Miller Creek area over the top of the hill south of Miller Creek and not through the valley floor. Undergrounding should start far enough back in Cahoot Canyon so that it will be out of sight, then proceed to a point across the river and Hiway 93.